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UNIVERSITY of MANITOBA

WINNIPEG

GENERAL CALENDAR

Session 1921-22

CALENDAR

University of Manitoba

WINNIPEG

Incorporated by Act of the Manitoba Legislature, 1877

Definitely Reorganized as a Provincial University, 1917

1921-1922

WINNIPEG
Printed for the University by Saults & Pollard Limited
1921

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TABLE OF CONTENTS

Page
Almanac, 1921-1922 5
Historical Sketch 7
Colleges Affiliated with the University 9
Executive Officers of the University 10
Board of Governors, 1920-1921 11
Council of the University, 1920-1921 12
Board of Studies and other Standing Committees, 1920-1921 13
General University Faculty, 1920-21 14
Faculty of Medicine 17
Faculty Council of Medicine 18
Administrative Staff 19
University Examiners 1920-1921 20
Requirements for Matriculation—
- For Arts and Science 23
- For Medicine 33
- For Engineering 35
- For Architecture, Law, etc. 36

Curricula in Arts—
- First Year 37
- Second Year 37
- Third and Fourth Years 39
- Master of Arts 41

Curricula in Science—
- First Year 42
- Second Year 42
- Third Year 43
- Fourth Year 43
- Master of Science 44

Courses in Arts and Science in Detail—
- Classical Greek 45
- Biblical Greek 47
- Latin 48
- Hebrew 49
- Scripture 51
- English 51
- French 55
- German 57
- Icelandic 59
- Philosophy (English) 59
- Philosophy (Latin) 61
- History 66
- Political Economy and Political Science 69
- Mathematics and Astronomy 72
- Physics 77
- Botany 79
- Geology and Mineralogy 81
- Chemistry 83
- Physiology and Pharmacology 85
- Biochemistry 88
- Zoology 89

Curricula in Engineering—
- Civil Engineering 91
- Electrical Engineering 93

Page
Courses in Engineering in Detail—
  Civil Engineering 96
  Electrical Engineering 100
Curriculum in Architecture 103
Courses in Architecture in Detail 105
Curricula in Medicine—
  For Doctor of Medicine 107
  For Master of Surgery 115
Courses in Medicine in Detail 116
  Regulations of the College of Physicians and Surgeons 129
Curriculum in Law 131
Manitoba Law School-Board of Trustees, 1921-1922 138
Manitoba Law School-Staff of Lecturers, 1921-1922 139
Curriculum in Pharmacy 140
Degree in Pharmacy 142
Courses in Pharmacy in Detail 143
Curriculum in Agriculture 144
Curriculum in Home Economics 148
Examination for Dental License 151
Examination for Nurses' Registration 153
Evening Commercial Courses 154
Social Welfare Courses 156
General Regulations—
  Registration 157
  Examinations (Term Work, Failures, Appeals, etc.) 157
  Attendance on Lectures and Practical Work 162
  Isbister Prizes and Scholarships 163
  Aikins Scholarships 165
  Matriculation Scholarship in Chemistry 166
  Research Prize in Science 166
  Prize of the Manitoba Branch of the Canadian Institute of Mining and Metallurgy 166
  The McMillan Fellowship 167
  Hudson's Bay Company Research Fellowship 167
  Clifford Moir Prize 168
  Travelling Scholarship 168
  Rhodes Scholarship 169
  Prizes in Medicine 172
  Medals 172
  Degrees in Absentia 173
  Grading of Degrees 173
  Academic Dress 173
  Fees 174
  Caution Money 175
Appendices—
  University Library 176
  Degrees Granted, 1920-1921 179
  Students in Attendance, 1920-1921 183

In the numbering of Courses of Instruction throughout this Calendar, except where it is otherwise explicitly stated in a footnote, the assignment of an odd number indicates that the course is given during the first term of the annual session; that of an even number that it is given during the second term; the assignment of a double number, odd and even, that it is given throughout both terms of the session.

ALMANAC, 1921-1922

1921—AUGUST

18—Thur. Last day for receiving applications for the September Examinations.

SEPTEMBER

1—Thur. Applications for admission from new students, with their credentials, should be filed with their respective Deans by this date.
1—Thur. Supplemental and Matriculation Examinations begin.
6—Tues. Finance Committee meets. Board of Studies meets. Surveying School begins.
8—Thur. First Meeting of Engineering Faculty.
9—Fri. First Meeting of Arts and Science Faculty.
9—Fri. First Meeting of Medical Faculty.
13—Tues. Registration. Opening day of First Term in Arts, Science, Pharmacy, Engineering, Architecture and Medicine. Board of Studies meets.
14—Wed. University Lectures begin in above faculties.
15—Thur. University Council meets.
16—Fri. Imposition of extra fee for late registration begins for students of above faculties.
20—Tues. Registration of Students in Medicine closes.
24—Mon. Registration of Students in Law closes.

OCTOBER

3—Mon. Registration closes in Arts, Science, Pharmacy, Engineering and Architecture. Last day for payment of fees.
4—Tues. Board of Studies meets.
7—Fri. University Field Day.
11—Tues. Finance Committee meets.
18—Tues. Board of Studies meets.

NOVEMBER

1—Tues. Board of Studies meets.
8—Tues. Finance Committee meets.
14—Mon. Payment of first moiety of Scholarships.
15—Tues. Board of Studies meets.
17—Thur. University Council meets.
21—Fri. Manitoba Government Civil Service Examinations begin.
23—Wed. Last day for receiving applications for December Supplemental and Special Examinations in Arts, Science Medicine, Engineering, Architecture and Pharmacy.

DECEMBER

6—Tues. Finance Committee meets. Board of Studies meets.
9—Fri. Lectures close for students writing December Examinations.
12—Mon. December Examinations begin.
13—Tues. Board of Studies meets.
23—Fri. First Term ends.
24—Sat. Christmas Vacation begins.

1922—JANUARY

3—Tues. Opening day of Second Term. University Lectures resumed. Board of Studies meets.
9—Mon. Dental License Examinations begin. Last date for payment of second term fees and degree fees for graduating students.

JANUARY—Continued

10—Tues.	Finance Committee meets.
17—Tues.	Board of Studies meets.
19—Thur.	University Council meets.

FEBRUARY

7—Tues.	Board of Studies meets.
13—Mon.	Payment of second moiety of scholarships.
14—Tues.	Finance Committee meets.
21—Tues.	Board of Studies meets.

MARCH

6—Mon.	Examinations in Architecture for Manitoba Association of Architects begin.
7—Tues.	Board of Studies meets.
9—Thur.	Most Rev. R. Machray, D.D., LL.D., Archbishop of Rupert's Land, first Chancellor of the University, died, 1904.
14—Tues.	Finance Committee meets.
16—Thur.	University Council meets.
21—Tues.	Board of Studies meets.
27—Mon.	Last day for receiving applications for April Supplemental and Special Examinations in Arts, Science, Medicine, Engineering, Architecture and Pharmacy.

APRIL

4—Tues.	Board of Studies meets.
11—Tues.	Finance Committee meets.
13—Thur.	University Lectures close.
14—Fri.	Good Friday.
17—Mon.	First Term Supplemental Examinations in Arts, Science, Medicine, Engineering, Architecture and Pharmacy begin.
18—Tues.	Board of Studies meets.
24—Mon.	Regular April Examinations in Arts, Science, Medicine, Engineering, Architecture and Pharmacy begin. N.B.—The practical Examinations in Arts, Science, Engineering and Pharmacy will be held in April, prior to the opening of the written Examinations. The practical Examinations in Medicine will be held subsequent to the written Examination. Post-graduate Course in Medicine begins.

MAY

2—Tues.	Board of Studies meets.
9—Tues.	Finance Committee meets.
13—Sat.	Post-graduate session in Medicine ends.
18—Thur.	Conferring of degrees. Statutory Meeting of Convocation.
22—Mon.	Manitoba Government Civil Service Examinations begin.

JUNE

6—Tues.	Finance Committee meets. Board of Studies meets.
12—Mon.	Dental License Examination begins.
13—Tues.	Nurses' Registration Examination begins.
15—Thur.	University Council meets.

THE UNIVERSITY OF MANITOBA

HISTORICAL SKETCH

The University of Manitoba was established by Act of the Manitoba Legislature, in 1877, "for the purpose (as the preamble states) of raising the standard of higher education in the Province and of enabling all denominations and classes to obtain academic degrees." The government of the University was vested in a Chancellor, a Vice-Chancellor and a University Council, with powers as a "body politic and corporate" to receive, hold and sell property, to arrange courses of study, to hold examinations and to grant degrees. The Act provided for the affiliation of Colleges and for the granting of degrees in Divinity by those Colleges to students who should have obtained recognized academic standing in Arts subjects. The Chancellor was to be appointed by the Lieutenant-Governor-in-Council, and the University Council was to consist of seven representatives from each of the affiliated Colleges, three from Convocation and two from the Board of Education of the Province.

The three Colleges already in existence in Manitoba were affiliated with the University at its inception. St. John's, the Anglican institution, had been reorganized in 1866 by Bishop (afterwards Archbishop) Machray, who became in 1877 the first Chancellor of the University. St. Boniface had grown from a mission school early in the century to be the chief Roman Catholic College of the West. Manitoba College, in connection with the Presbyterian Church, had been organized in 1871. The Vice-Chancellor of the new University was the Hon. Joseph Royal; the Bursar was Mr. Duncan Macarthur; and the Registrar Mr. E. W. Jarvis.

Since 1877 four Colleges have been received into affiliation with the University. The Manitoba Medical College was affiliated in 1882, Wesley College was affiliated in 1888, the Manitoba College of Pharmacy in 1902, and the Manitoba Agricultural College in 1907.

In 1885 an agreement between the Dominion Government and the Province of Manitoba provided for an endowment not exceeding 150,000 acres of land for the University of Manitoba "for its maintenance as a University capable of giving proper training in the higher branches of education."

In 1900 an amendment to the University Act gave the University "power to give instruction and teaching in the several faculties and different branches of knowledge as may from time to time be directed by the Council of the University." The present site was granted by the Dominion Government, and the corner-stone was laid in 1900 by the King, then Duke of Cornwall and York. Four new chairs in the Natural and Physical Sciences were founded in 1904, and as well one in Mathematics and one in the combined subjects of Histology, Pathology and Bacteriology. The number of Science chairs was subsequently increased to six, Geology and Mineralogy, which at the first was combined in part with Botany and in part with Physics, being given independent status, and as well Zoology, which at first was attached to Physiology. A department of Civil Engineering was organized in 1907, and departments of Electrical Engineering, Political Economy, English and History in 1909. Departments of Architecture, of French and of German were created in 1913, and began their work in the fall of that year. In the fall of 1914 the following new departments were instituted:—A department of Pharmacy, which took over the teaching in this subject formerly done by the Manitoba College of Pharmacy; a department of Mechanical Engineering; a department of Classics. In addition, the work of the departments of English, French, German, History and Political Economy, which had hitherto been confined to the subjects of the Third and Fourth Years in Arts, was extended to include those of the First and Second Years and the department of Mathematics, which had hitherto covered only the Second, Third and Fourth Years, assumed responsibility for the work of the First Year as well. The University thus came into the position of offering for the first time through its own faculty the full work of the course in Arts for the B.A. degree.

The affiliation of Manitoba Agricultural College with the University was terminated by an Act of the Provincial Legislature in 1912 but restored again in 1916.

The first President of the University, Dr. James A. MacLean, assumed office on January 1st, 1913.

By the University Amendment Act, 1917, there has been introduced into the corporation a Board of Governors of nine members, appointed by the Lieutenant-Governor-in-Council for a period of three years, three retiring each year, and in this Board is vested "the government, conduct, management and control of the University," including its lands, investments, appointments, limits of instruction, etc. The Council of the University has been continued, but with a reduction in the number of its members from seventy-two to twenty-eight and a limitation of the sphere of its activity to that of "general charge of the academic work of the University," within which range it is still subject to the plenary power vested in the Board of Governors. Its representative character is maintained as is shown by the following composition: The Chancellor, the President, four representatives from the faculty of the University, two representatives from Manitoba Agricultural College, one representative from Manitoba Medical College, one representative from the College of Physicians and Surgeons of Manitoba, six members to be appointed by the Lieutenant-Governor-in-Council, four representatives to be elected by Convocation and two representatives from each of the affiliated Arts Colleges, St. Boniface, St. John's, Manitoba and Wesley. Definite legislative recognition is given to the practice of the submission annually to the Lieutenant-Governor-in-Council through the Minister of Education of a budget of "anticipated revenues and proposed expenditures" and of the appropriation by the Legislature of money for University expenditures.

During the session 1919-1920, an agreement was reached with the Faculty of Manitoba Medical College whereby that institution passes out of existence upon the assumption by the University of responsibility for the maintenance of medical teaching in an adequate manner. In pursuance of this arrangement a full Medical Faculty has been appointed and a faculty organization completed.

Provision has also been made for the teaching by the University of philosophy, including metaphysics, ethics and psychology, and a chair of Philosophy and Psychology has been established.

COLLEGES AFFILIATED WITH THE UNIVERSITY

St. Boniface College, St. Boniface, in connection with the Roman Catholic Church. *Rector*—Rev. H. Bourque, S.J., St. Boniface College.

St. John's College, Winnipeg, in connection with the Church of England. *Warden*—Rev. G. A. Wells, C.M.G., D.S.O., B.A., St. John's College.

Manitoba College, Winnipeg, in connection with the Presbyterian Church in Canada. *Principal*—Rev. John MacKay, M.A., D.D., Manitoba College.

Wesley College, Winnipeg, in connection with the Methodist Church in Canada. *President*—Rev. J. H. Riddell, B.A., D.D., 223 Colony Street.

Manitoba Law School, Winnipeg. Chairman of Trustees—Hon. H. A. Robson, K.C., LL.D., Union Bank Building.

Manitoba Agricultural College. President—John Bracken, B.S.A., Agricultural College, St. Vital.

Visitor
SIR JAMES AIKINS, M.A., LL.D., K.C.
Lieutenant-Governor of Manitoba

Chairman of Board of Governors
ISAAC PITBLADO, M.A., LL.D., K.C.

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MOST REV. S. P. MATHESON, D.D., D.C.L.
Archbishop of Rupert's Land

Vice-Chancellor
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Honorary Bursar
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JOHN A. MACHRAY, M.A., LL.B., K.C.

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COUNCIL OF THE UNIVERSITY, 1920-1921

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JAMES A. MacLEAN, Ph.D., LL.D.

Appointed by the Faculty of the University:
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FRANK ALLEN, M.A., Ph.D.
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J. N. FINLAYSON, M.Sc.

Appointed by the Manitoba Agricultural College:
JOHN BRACKEN, B.S.A., President.
G. A. SPROULE, B.A.

Appointed by Manitoba Medical College:
S. W. PROWSE, M.D., C.M., F.A.C.S., Dean.

Appointed by the College of Physicians and Surgeons of Manitoba:
THOS. TURNBULL, M.D.

Appointed by the Lieutenant-Governor-in-Council:
ROBERT FLETCHER, B.A.
MRS. R. F. McWILLIAMS, M.A.
WILLIAM A. McINTYRE, B.A., LL.D.
FRANK H. SCHOFIELD, M.A.
REV. JOHN L. BROWN
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Elected by the Graduates of the University:
D. M. DUNCAN, M.A.
E. LOFTUS, M.A., LL.B., K.C.
DANIEL McINTYRE, M.A., LL.D.
W. J. SPENCE, B.A.

Appointed by St. Boniface College:
REV. H. BOURQUE, S.J., Rector.
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Appointed by St. John's College:
VERY REV. G. F. COOMBES, M.A., D.D.
REV. E. A. W. GILL, M.A.

Appointed by Manitoba College:
REV. A. B. BAIRD, M.A., D.D.
REV. J. MACKAY, M.A., D.D., Principal.

Appointed by Wesley College:
REV. J. H. RIDDELL. B.A., D.D., President.
REV. A. STEWART, D.D.

STANDING COMMITTEES OF THE UNIVERSITY COUNCIL, 1920-1921

Board of Studies: President MacLean (Chairman), Professor F. Allen, Professor F. W. Clark, Professor N. B. MacLean, Professor J. N. Finlayson, Very Rev. Dean Coombes. Major D. M. Duncan, Rev. Father Bourque, Dr. S. W. Prowse. Professor Sproule, Dr. W. A. McIntyre, Rev. Dr. Baird, Rev. Dr. Stewart, W. J. Spence (Secretary).

Library Committee: F. H. Schofield (Chairman), President MacLean, Professor Allen, Rev. Father Bourque, Rev. Dean Coombes, Professor MacLean, Professor J. N. Finlayson, Professor F. W. Clark, F. E. Nuttall (Secretary).

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GENERAL UNIVERSITY FACULTY, 1920-1921

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——————
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Lecturer in French....................308, The Belvidere

A. MARIE HAYNAUD, B.A. (Queen's)
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Lecturer in Botany....................1588 Wolseley Ave. W.

EILEEN BULMAN, M.A. (Columbia), B.Sc. (Man.)
Lecturer in Zoology....................139 Middle Gate

SESSIONAL APPOINTMENTS FOR 1920-1921

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Special Lecturer in Civil Engineering..........701 McMillan Avenue

R. K. FINLAYSON, B.A. (Man.), LL.B. (Man.)
Special Lecturer in History....................Ste. G, Lee Court

LILY A. McCULLOUGH, M.A. (Man.), LL.B. (Man.)
Assistant in Political Economy....................676 Spence Street

CHARLES FREDERICK CAMERON, B.A. (Man.), B.C.E. (Man.)
Assistant in Civil Engineering....................124 Evanson Street

JOHN A. M. EDWARDS, M.A. (Man.)
Assistant in English.......201 Balmoral Street

DALTON L. TWISS, B.A. (McM.)
Assistant in Physics.

A. KATHLEEN ELLIS, M.A. (Man.)
Assistant in German.......Y.W.C.A.

F. A. SEDZIAK, C.E.
Assistant in Physiology and Biochemistry

ANDREW MOORE, B.A. (Man.), B.Sc. (Man.)
Assistant in Physiology and Biochemistry.

LUCAS G. THOMPSON, B.Sc. (Man.)
Demonstrator in Geology.......41 Hargrave Street

SOLOMON G. LIPSHITZ, B.Sc. (Man.)
Demonstrator in Chemistry.......Ste. 16, Virginia Apts.

PAUL G. HIEBERT, M.A. (Tor.)
Demonstrator in Chemistry.......261 Furby Street

LLOYD MOOREHOUSE, B.A.Sc. (Tor.)
Demonstrator in Civil Engineering.

JAMES K. BELL, B.C.E. (Man.)
Demonstrator in Civil Engineering.......319 Oakwood Street

CLIFFORD A. MERRITT.
Demonstrator in Chemistry.......808 Alverstone Street

IVAN R. McHAFFIE, B.A. (Man.), B.Sc. (Man.)
Demonstrator in Chemistry.

MICHAEL S. HOLLENBERG, B.A. (Man.)
Demonstrator in Physiology.

PAUL BENNETT, B.A. (Chicago)
Instructor in Athletics.

FACULTY OF MEDICINE, 1920-1921

S. W. PROWSE, B.A., M.D., F.R.C.S. (Edin.), F.A.C.S.
Dean.

E. S. POPHAM, M.A., M.D., C.M.
Secretary.

R. J. BLANCHARD, M.B., C.M. (Edin.), F.A.C.S.
H. H. CHOWN, B.A., M.D., C.M.
Professores Emeriti in Surgery.

GORDON BELL, B.A., M.D., C.M.
Professor of Bacteriology and Hygiene and Director of the Department.

H. E. BLETCHER, B.Sc. (Phar.), F.C.I.C.
Professor of Materia Medica and Pharmacy.

WILLIAM BOYD, M.D., M.R.C.P. (Edin.), Dipl. Psych. (Edin.).
Professor of Pathology and Director of the Department.

A. T. CAMERON, M.A., B.Sc. (Edin.), F.I.C., F.C.I.C., F.R.S.C.
Associate Professor of Biochemistry.

C. C. FIELD, M.D., C.M.
Professor of Paediatrics.

J. WILFORD GOOD, M.B., L.R.C.P. (Edin.), F.A.C.S.
Professor of Ophthalmology and Head of the Department.

J. C. B. GRANT, M.C., M.B., Ch.B., F.R.C.S. (Edin.).
Professor of Anatomy and Director of the Department.

JASPER HALPENNY, M.A., M.D., C.M., F.A.C.S.
Professor of Surgery and Clinical Surgery and
Director of the Department of Surgery.

E. W. MONTGOMERY, M.A., M.D., C.M.
Professor of Medicine and Clinical Medicine and
Director of the Department of Internal Medicine.

J. A. McARTHUR, M.D., C.M.
Professor of Medical Jurisprudence.

D. H. McCALMAN, B.A., M.D., C.M.
Professor of Obstetrics and Head of the Department.

S. WILLIS PROWSE, B.A., M.D., F.R.C.S. (Edin.), F.A.C.S.
Professor of Laryngology and Otology and
Head of the Department.

R. M. SIMPSON, D.S.O., M.D., C.M., L.R.C.P. & S., F.A.C.S.
Professor of Gynaecology and Clinical Gynaecology and
Head of the Department of Gynaecology.

A complete list of members of the Faculty of Medicine, including part-time instructors and sessional appointments, is contained in the Medical Calendar.

FACULTY COUNCIL OF MEDICINE, 1920-1921

James A. MacLean, Ph.D., LL.D.....................*President of the University*
S. W. Prowse, B.A., M.D., F.R.C.S. (Edin.) *Dean of the Faculty of Medicine*
E. S. Popham, M.A., M.D., C.M......*Secretary of the Faculty of Medicine*

Gordon Bell, B.A., M.D., C.M.
C. C. Field, M.D., C.M.
J. Halpenny, M.A., M.D., C.M.
E. W. Montgomery, M.A., M.D. C.M.
R. M. Simpson, M.D., C.M.

ADMINISTRATIVE STAFF, 1920-1921

President	JAMES A. MacLEAN, Ph.D., LL.D.
Registrar	W. J. SPENCE, B.A.
Assistant Registrar	W. B. H. TEAKLES, B.A.
Honorary Bursar	J. A. MACHRAY, M.A., LL.B., K.C.
Secretary University Land Board	R. H. SHANKS.
Accountant	S. K. FORDE.
Dean of the Faculty of Medicine	S. W. PROWSE, B.A., M.D.
Dean of Women	MRS. URSILLA N. MACDONNELL, M.A.
Librarian	F. E. NUTTALL, M.A.

President's Secretary: NORA E. BELL, B.A.

Registrar's Assistants: HELENA MACVICAR, C. F. BLACK, B.A., G. C. YOUNG, HELEN M. PRESCOTT, GLADYS TREMAYNE, LILLIAN COOK, MABEL NASH.

Library Assistants: J. ADINA FALCONER, B.A., HORATIO WALLACE, M.A., FLORENCE BISSETT, B.A.; EDNA GREER, B.A. (Engineering Library).

Buildings and Grounds—Mechanic: A. BOWLEY; *Carpenter*: E. MOXAM
Assistant-Carpenter: J. R BENTHAM.
Caretakers: JAMES CHALK, ANDREW P. COX, CHARLES ALLBUT, JOSEPH SAMMONS, HARRY ROBBINS, HARRY PLANK, T. R. WATTS, T. BLAKER, STANLEY SHELDRAKE, H. COPPLE, S. JOHANNSON.

UNIVERSITY EXAMINERS, 1920-1921

ARTS AND SCIENCE

Classics: Professors Coombes and Clark, Rev. J. W. Matheson (St. John's), Professor Johnson (Wesley), Assistant Professor Taylor, Assistant Professor W. M. Hugill, Rev. J. Monaghan (St. Boniface), Rev. G. Hacault (St. Boniface).

Biblical Greek: Rev. Dr. Riddell (Wesley), Rev. Dr. Baird (Manitoba), Rev. J. W. Matheson (St. John's).

Hebrew: Rev. Dr. Stewart (Wesley), Rev. Dr. Perry (Manitoba), Rev. J. W. Matheson (St. John's), Rev. A. E. Hetherington (Wesley).

English: Professor Crawford, Rev. E. A. W. Gill (St. John's), Assistant Professor Perry, Assistant Professor Allison, Professor Greever (Wesley), Assistant Professor R. F. Argue (Wesley), Assistant Professor Amos, Rev. J. Monaghan (St. Boniface), Mrs. U. N. Macdonnell, Mr. J. A. M. Edwards.

French: Professor Osborne, Mr. A. D. Baker (St. John's), Miss C. A. Ballu, Miss C. F. Armstrong (Wesley), Miss A. M. Haynaud, Miss Lillian S. Johnston (Wesley), Rev. G. Hacault (St. Boniface).

German: Professor Heinzelmann, Mr. A. D. Baker (St. John's), Miss A. K. Ellis, Miss Lillian S. Johnston (Wesley).

Icelandic: Professor Johnson (Wesley), Rev. R. Marteinsson.

Philosophy: Professor Wright, Professor Lodge, Rev. Dr. Baird (Manitoba), Rev. Dr. Elliott (Wesley), Rev. Dr. Fleming (Manitoba), Rev. A. E. Hetherington (Wesley), Rev. W. C. de Pauley (St. John's), Rev. P. Bournival (St. Boniface).

Political Economy: Professor Clark, Rev. Dr. Elliott (Wesley), Rev. J. F. Cross (St. John's), Assistant Professor Jones, Miss L. A. McCullough, Rev. A. Buron (St. Boniface).

History: Professor Martin, Assistant Professor Harvey, Professor Dadson (Wesley), Rev. E. A. W. Gill (St. John's), Mr. A. C. Cooke (Wesley), Mr. R. K. Finlayson, Mr. J. A. M. Edwards, Rev. G. Hacault (St. Boniface), Rev. J. Monaghan (St. Boniface).

Mathematics and Astronomy: Professor MacLean, Professor Wilson, Assistant Professor Warren, Rev. J. F. Cross (St. John's), Assistant Professor Tier, Assistant Professor Kingston, Professor O. T. Anderson (Wesley), Rev. A. Buron (St. Boniface).

Physics: Professor Allen, Rev. J. F. Cross (St. John's), Assistant Professor McClung, Assistant Professor Miller, Professor O. T. Anderson (Wesley), Mr. D. L. Twiss.

Botany: Professor Buller, Assistant Professor Roberts, Mr. C. W. Lowe.

Geology and Mineralogy: Assistant Professor DeLury, Assistant Professor Burwash.

Chemistry: Professor Parker, Assistant Professor Armes, Assistant Professor Shipley, Rev. A. Buron (St. Boniface).

Physiology: Associate Professor Cameron, Professor O'Donoghue, Dr. W. A. Gardner.

Zoology: Professor O'Donoghue, Mr. C. F. Curtis Riley, Miss Eileen Bulman, Rev. A. Buron (St. Boniface).

Biochemistry: Associate Professor Cameron, Professor Parker, Dr. C. R. Gilmour.

Pharmacy: Professor Bletcher, Mr. H. D. Campbell.

ENGINEERING AND ARCHITECTURE

English: Assistant Professor Perry, Assistant Professor Amos.

French: Professor Osborne, Mlle. C. A. Ballu, Mlle. A. M. Haynaud.

Mathematics: Professor MacLean, Professor Wilson, Assistant Professor Warren, Assistant Professor Tier, Assistant Professor Kingston.

Physics: Professor Allen, Assistant Professor McClung, Assistant Professor Miller, Mr. D. L. Twiss.

Chemistry: Professor Parker, Assistant Professor Armes, Assistant Professor Shipley.

Engineering: Professor Finlayson, Professor Fetherstonhaugh, Assistant Professor Johnstone, Assistant Professor Dorsey, Assistant Professor Moffatt, Assistant Professor Hall, Mr. Douglas L. McLean, Mr. C. F. Cameron.

Architecture: Professor Stoughton, Professor Finlayson.

AGRICULTURE AND HOME ECONOMICS

English: G. A. Sproule, B.A.; C. R. Hopper, B.A.; A. E. Johnson, M.A.; G. E. Belton.

Chemistry: C. B. Clevenger, Ph.D.; W. F. Geddes, B.S.A., A.C.I.C.; Jean R. Panton, B.A.

Physics and Mathematics: S. C. Lee, M.A.; A. W. Muldrew, B.A.

Biology: V. W. Jackson, B.A.; Guy R. Bisby, Ph.D.

Horticulture and Entomology: F. W. Brodrick, B.S.A.; A. V. Mitchener, B.A., B.S.A.

Bacteriology: C. H. Lee, M.A.

Economics and Rural Sociology: R. W. Murchie, M.A.

Field Husbandry: T. J. Harrison, B.S.A.; Wm. Southworth, M.Sc.A.; W. T. Wiener, B.S.A.; J. T. Ellis, B.S.A.

Animal Husbandry: Gordon W. Wood, B.S.A.; Jas. M. Brown, B.S.A.; H. B. Sommerfeld.

Dairy Husbandry: R. W. Brown, B.S.A.; Norman James, B.S.A.

Poultry Husbandry: M. C. Herner, B.S.A.

Engineering: G. L. Shanks, B.S.A.; H. R. Robson; Robinson Mitchell.

Veterinary Science: Dr. W. A. Shoults.

Household Management and Physiology and Hygiene: Mrs. Lottie Duncan; Miss Mary Kelso.

Clothing and Textiles: Miss Clara Groff; Miss Eleanor McFadden.

Cooking and Nutrition: Miss Mary Hiltz, B.Sc.; Miss Mary Moxon.

Pedagogy: Miss Mary Kelso.

Art and Home Furnishing: Mrs. Jean South.

MEDICINE

Chemistry: Professor Parker, Assistant Professors Armes and Shipley.

Zoology: Professor O'Donoghue, Mr. C. F. Curtis Riley.

Physiology: Associate Professor A. T. Cameron, Dr. W. A. Gardner.

Biochemistry: Associate Professor A. T. Cameron, Dr. C. R. Gilmour.

Histology: Professor Grant, Dr. D. Nicholson, Dr. T. Digby Wheeler.

Pathology: Professor Boyd, Dr. F. T. Cadham.

Anatomy (Theoretical): Professor Grant, Dr. A. Gibson.

Anatomy (Practical): Professor Grant, Dr. A. Gibson, Drs. T. D. Wheeler and H. C. McAlister (First Year only).

Embryology: Professor Grant, Dr. A. Gibson.

Materia Medica and Pharmacy: Professor Bletcher, Dr. Edith M. Ross.

Hygiene: Dr. A. J. Douglas, Dr. M. S. Fraser.

Theoretical Medicine (Fourth Year): Dr. E. S. Moorhead, Dr. F. A. Young.

Theoretical Medicine (Fifth Year): Dr. E. W. Montgomery, Dr. C. R. Gilmour.

Clinical Medicine (Fourth Year): Dr. W. Chestnut, Dr. E. L. Pope, Dr. F. Benner, Dr. Spurgeon Campbell.

Clinical Medicine (Fifth Year): Dr. Charles Hunter, Dr. W. Rogers, Dr. J. R. Davidson, Dr. A. W. Moody.

Theoretical Surgery (Fourth Year): Dr. J. D. McEachern, Dr. G. S. Fahrni.

Theoretical Surgery (Fifth Year): Dr. J. O. Tod, Dr. O. S. Waugh.

Clinical Surgery (Fourth Year): Dr. B. J. Brandson, Dr. N. J. Maclean, Dr. G. H. Hiebert, Dr. T. G. Hamilton.

Clinical Surgery (Fifth Year): Dr. J. Halpenny, Dr. J. McKenty, Dr. J. E. Lehmann, Dr. W. L. Mann.

Obstetrics: Dr. D. H. McCalman, Dr. O. Bjornson.

Gynaecology: Dr. D. S. MacKay, Dr. J. Pullar.

Clinical Gynaecology: Dr. R. M. Simpson, Dr. A. Bercovitch.

Clinical Ophthalmology and Otology: Dr. T. H. Bell, Dr. G. W. Fletcher, Dr. E. J. Washington, Dr. A. Leishman.

Therapeutics: Dr. A. J. Burridge, Dr. H. M. Murdoff.

Paediatrics: Dr. C. C. Field.

C.M. Degree: Dr. J. E. Lehmann, Dr. H. C. Cunningham.

MATRICULATION FOR ARTS OR SCIENCE

Subjects of Examination

All students desiring to enter upon a course in Arts or Science must pass an examination in the following subjects:

1. English.
2. History.
3. Mathematics.
4. Latin, *or* Greek, *or* French, *or* German.
5. A language not already taken in "4" above*, *or* two sciences from the following list: Physics, †Chemistry, Botany, †Physical Geography.
6. A language not already taken in "4," or "5," *or* *two sciences not already taken in "5," *or* one science not already taken in "5" with one of the following: †Home Economics, †Industrial Arts, †Music, †Agriculture, †Commercial Work.

Division of Examination into Stages

The subjects of this curriculum of studies may be taken at any regular examination, at one time, or may be divided into two parts as below, which may be taken at successive examinations. The parts must, however, be taken in the order as here given:

PART I—English Grammar, General History (Ancient and Mediaeval), General History (Modern), Arithmetic, Botany (if elected) Physics (if elected).

PART II—English Literature, Rhetoric and Composition, British and Canadian History, Algebra, Geometry, the language or languages elected, Chemistry (if elected) ‡Physical Geography (if elected), Home Economics (if elected), Industrial Arts (if elected), Music (if elected), Agriculture (if elected), Commercial Work (if elected).

For a period of three years, 1921 to 1923, inclusive, it has been arranged that no examinations will be required for Matriculation standing in the subjects of General History (Ancient and Mediaeval) of Grade IX. and of English Grammar, General History (Modern), Arithmetic, Botany and §Physics of Grade X. from pupils of the Collegiate Institutes of the province, where recommended for such exemption by their school principals.

Examination by Subjects

Candidates who are not prepared to write on the full course may offer themselves at any regular examination in the whole of any subject or subjects of *both* parts of this programme, such as all the English, or all the Mathematics, etc., and on passing a satisfactory examination they shall receive credit therefor; but no such candidate taking the examination according to subjects shall be allowed to proceed with the First Year until he has been examined in all the subjects and has satisfied the examiners in all save one subject.

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* For the language in "5" or "6" above, the student is permitted to elect either Icelandic or Swedish, and to present in lieu of examination therein—in the case of Icelandic, a certificate of having adequately prepared the prescribed course of study in Jon Bjarnason Academy, or an affiliated college of the University, from the authorities of the institution; in the case of Swedish, a certificate of having adequately prepared the prescribed course of study in Brandon College, or an affiliated college of the University, from the authorities of the institution.

† For details of course see "Program of Studies" issued by the Department o Education.

‡ Students entering in 1921-1922 upon the High School course leading to Matriculation may take a course in General Science in Grade IX. (for an outline of which see the "Program of Studies" of the Department of Education), which, when supplemented by a more advanced course in General Science in Grade X. in the following year will rank as a Science subject for Matriculation credit. For this and succeeding classes the subject of Physical Geography will be withdrawn.

§ When Physics is transferred to Grade XI, it will become a subject of examination for such students.

Standing Required

To each of the papers of the Matriculation Examination one hundred marks are assigned.

A candidate, in order to pass in any paper in English, must have 50 per cent. in that paper. To pass in any other paper a candidate must have 40 per cent. of the marks in that paper. In Botany a pass will be exacted in Practical as well as in Theoretical Botany. To obtain Second Class standing he must have 50 per cent. or more on the aggregate of the required papers. To obtain First Class standing, grade B, he must have 67 per cent. or more on the aggregate of the required papers. To obtain First Class standing, grade A, he must have 80 per cent. or more on the aggregate of the required papers. A standing under 50 per cent. is graded as Third Class.

The same minimum percentages are used in determining a candidate's standing in an individual subject as upon the whole examination.

Candidates taking the examination by subjects, in order to secure any credit, are required to pass in half the papers they select and to attain an average standing of 40 per cent. on all the papers they select.

Supplemental Examinations

Candidates who fail on not more than one paper of Part I. Matriculation or on two papers of which History of Grade IX. is one, and candidates who fail on not more than two papers of Part II. Matriculation, receive standing on the examination but are required to take a supplemental examination in the paper or papers in which they have failed.

Candidates who fail in more than one paper of Part I. Matriculation, or in more than two papers of which History of Grade IX. is one, or in more than two papers of Part II. Matriculation, are required to take the whole examination again.

Supplemental examinations granted a candidate at a Part I. Matriculation examination may be taken when that candidate is writing on the Part II. Matriculation examination without additional fee.

Candidates, writing on Parts I. and II. Matriculation at the same examination, who fail in not more than three papers, receive standing on the examination but are required to take a supplemental examination in the papers in which they have failed.

Candidates, writing on Parts I. and II. Matriculation at the same examination, who fail in more than three papers, are required to take the whole examination again.

Candidates, taking the examination by stages and candidates writing upon the whole examination at one time, who have failed in not more than two papers, or who, having failed in three papers, have subsequently reduced the number of their conditions to two, and candidates taking the examination by subjects, who have been examined in all the subjects and have fully satisfied the examiners in all save one subject, may, as conditioned students, offer themselves for the examination of the First Year; but such conditions must in each case be removed before the commencement of the Second Year.

A student failing at a Part I. or Part II. Matriculation Examination will not be required to repeat at a subsequent examination any paper or papers in which he has obtained at least 60 per cent. Such a student must, of course, bring himself within the ordinary requirements as to removal of conditions, as outlined in the last preceding paragraph, before being admitted to the First Year.

The time allowed for each paper of the Matriculation Examination is three hours.

The Matriculation Examination is held twice in each year, viz., in June and in September. The June examination is conducted by the Department of Education, along with its Teachers' and other examinations, but University standards and regulations as set forth above are in force. Part I. Matriculation candidates will take the General History (Ancient and Mediaeval) as for Grade IX. of the Department of Education's course for High Schools, and the remaining subjects as for Grade X. Part II. Matriculation candidates will take the subjects required by the University as for Grade XI. of the Department of Education. The June examination will be given at local centres, as arranged by the Department of Education. The September examination will be conducted by the University itself, and will be held only at the University in Winnipeg. Supplemental examinations may be arranged locally in September on special request at a limited number of centres authorized by the University Council.

PART I (Grades IX and X)

ENGLISH AND HISTORY

Grammar—Lang: Intermediate English Grammar.

General History—Botsford: A Brief History of the World (Complete).

Equivalents for French-speaking Students.

Grammaire—Ragon: Grammaire Française. (Cours Moyen.)

Histoire—Drioux: Histoire d'Angleterre. Bourgeois: Histoire du Canada.

MATHEMATICS

Arithmetic and Mensuration—The examination will test the candidate's knowledge of the ordinary arithmetical processes and his power to apply his knowledge to the commercial, industrial, agricultural, domestic and scientific problems of ordinary life. Dominion High School Arithmetic (W. J. Gage & Co.).

ELEMENTARY SCIENCE—BOTANY

Bailey, Beginners' Botany (revised edition by B. J. Hales); Hales Western Flora. Structure, function and ecology of plants. The texts may be obtained separately or combined in one volume.

An adequate study of the common plants of the following orders, with a view to the understanding of plant classification; ranunculaceæ, leguminosæ, cruciferæ, rosaceæ, lilaceæ and compositæ. Students are expected to so familiarize themselves with the distinguishing characters of the above orders as to readily identify individual members. It is also expected that students will be given sufficient practice in expressing botanical observations. by means of diagrams, oral and written work, and by the mounting of a few specimen plants. Candidates will be allowed the use of a key for a portion of the examination.

N.B.—Plants will be submitted to candidates for description and identification at the examination, and a pass will be exacted on this part of the examination as well as on the theoretical test.

ELEMENTARY SCIENCE—PHYSICS

Grade X

High School Physics (Copp-Clark & Co.) Chapters I, III (omitting paragraphs 44-48); IV, V, VI (omitting paragraphs 68-69). VII, IX. Chapters X, XI, XII and XIII. In Chapter XIV the work of the lift pump, force pump and siphon. Chapters XVIII, XIX (omitting 197-201). Chapter XX (omitting paragraphs 208-211). Chapter XXI (omitting 216-218, 222-223 and 226). Chapter XXII (omitting paragraphs 232-235), XXIV, XXV, XXVIII, XXIX (omitting 283-288 and 293-297). Chapters XXXI, XXXII, XXXIII, XXXV, XXXVII (omitting 368-377). Chapter XXXVIII (omitting concave lens, combination of lenses, and paragraphs 386, 388-390). Chapter XXXIX (omitting 398-406). XL (omitting 418-421). Chapter XLI (omitting 431-440). Chapter XLIII (omitting all chemical explanations). Chapter XLIV (omitting all except simple Electrolysis and Electroplating). Chapter XLV (omitting amperes, laws, relay, tangent galvanometer). Chapter XLVI (omitting laws of induced currents and self-induction). Chapter XLVII (omitting all except simple dynamo and motor). Chapter XLIX (omitting all except Ohm's law, ampere, ohm, volt and watt).

PART II. (Grade XI)

(Although the examination in these subjects is given at the end of Grade XI., the work of preparation extends in most cases over the full three years of the High School course. For the convenience of teachers, a suggested programme of work for Grades IX and X is included below. For fuller details see "Programme of Studies" issued by the Department of Education.)

ENGLISH AND HISTORY

Grades IX and X

Composition—High School Composition: Western Canada Series (Copp-Clark Co.).

The course will include the following:

(*a*) The formal rhetorical study of the sentence and the paragraph along the lines of the text-book indicated.

(*b*) Frequent practice in composition of a simple character, based on personal experiences, everyday events and objects and themes drawn from prescribed literature, reporting and editorials, letter writing, social and business. Attention to correct mechanical form will be demanded.

The following text is prescribed as affording models of style and material for work in composition. A general knowledge of its contents is required.

1922. Stevenson: Treasure Island.

Literature—A careful study of the following texts: Narrative and Lyric Poems, Second Series (Copp Clark Co.) pages 64-131 inclusive. Scott: Lay of the Last Minstrel.

Grade XI

1. **Composition**—High School Composition: Western Canada Series (Copp Clark Co.)

The examination will presuppose the following:

(*a*) The formal rhetorical study of the sentence, the paragraph, the whole composition, and the word along the lines of the text-book indicated; a study of the qualities of style.

(*b*) Frequent practice in formal essay work, based on current events, prescribed literature, etc.; debating, class criticism.

2. **Literature**—Intelligent comprehension of the prescribed texts, and familiarity with their content will be required, and the candidate will be expected to have memorized some of the finest passages.

1922. Shakespeare: Henry V; Midsummer Night's Dream. Selections from Alexander's Anthology (Copp-Clark & Co.): Sir Patrick Spens. Milton: On his Blindness; To the Lord General Cromwell; On his having arrived at the age of twenty-three. Pope: From "The Essay on Man." Gray: Elegy written in a Country Churchyard. Wordsworth: "She dwelt among the untrodden ways"; Elegiac Stanzas; Influence of Natural Objects; "It is not to be thought of"; London, 1802; Nutting; Ode to Duty. Scott: Marmion and Douglas. Byron: The Eve of Waterloo; The Isles of Greece. Shelley: The Cloud; To a Skylark; Ode to the West Wind. Keats: Ode to Autumn; On first looking into Chapman's Homer. Tennyson: "Break, break, break"; "Tears, idle tears"; Aenone; Ulysses; In Memoriam LXIV, LXXXVI, CI, CVI, CXXIII. Browning: The Lost Leader; "How they brought the good news." Bryant: To a Waterfowl. Lampman: Winter-break; Evening. Macaulay: Essay on Addison. George Eliot: Silas Marner.

The Literature examination will be confined to the Shakespeare and lyrics prescribed. The prose may be used to provide material for essay work. Some of the essay themes set will be drawn from it.

3. **British and Canadian History**—Wrong: The British Nation. For Canadian History a syllabus and bibliography will be issued by the University and Department of Education.

The English and History papers will be examined for spelling, and the examiners will include in their report a statement of the standing of each candidate in this regard. Students found deficient in this respect will be required to pass an examination in dictation before proceeding with their course. Such students will receive from the Registrar full particulars as to date, place of examination, fee, etc.

Equivalents for French-speaking Students

Grades IX and X

Composition—Un essai sur un de plusieurs sujets indiqués par les examinateurs. L'écriture devra être lisible, l'orthographe et la ponctuation correctes, et la construction des phrases soignée. Il faudra aussi faire attention au plan général de la composition, à l'ordonnance des idées, et à la propriété des termes. Sa valeur dépendra plutôt de la qualité que de la quantité.

1922. *Modèles Francais*—Procès, Tomes II. et III. Poésie—Viennet, Tome II., pp. 382-383. Andrieux, Tome III., pp. 283-288. Nodier, Tome III., pp. 385-389. Barbier, Tome III., pp. 558-561. Prose—Molière, Tome II., pp. 51-84.

1922. *Auteurs*—Daudet: La Belle Nivernaise. Moreau: La Souris Blanche.

Grade XI

Au lieu de l'Anglais ci-dessus le Français pour les candidates de langue française sera comme suit:

1. **Rhétorique et Composition**—

(*a*) Vérest: Manuel de Littérature. Principes généraux, style, versification, pp. 1-12, 53-171; débit, pp. 188-205; genres intermédiaires en poésie, pp. 499-517.

(*b*) Un essai d'à peu près deux pages, grand format, sur un des sujets indiqués par les examinateurs. L'écriture devra être lisible, l'orthographe et la ponctuation correctes, et la construction des phrases soignée. Il faudra aussi faire attention au plan général de la composition, à l'ordonnance des idées, et à la propriété des termes. Sa valeur dépendra plutôt de la qualité que de la quantité. On allouera 25 per cent. pour les principes de littérature et 75 per cent. pour l'essai.

2. **Littérature**—

1922. *Modèles Francais:* Procès, Tomes II. et III. *Extraits en prose.* X. de Maistre (II. pp. 327-341), A. Daudet (II. pp. 604-609, et III. pp. 679. 683). *Extraits poétiques:* Brizeux (II. pp. 503-510, et III. 533-542), Delavigne (II. pp. 435-449, et III. pp. 430-434), Coppée (II. pp. 609-621, et III. pp. 688-692), Corneille (III. pp. 17-29).

Auteurs: Veuillot: Corbin et d'Aubecourt. Racine: Les Plaideurs.

MATHEMATICS

Grades IX and X

Algebra and Geometry—Crawford's Algebra (Western Canada Series), Chapters I. to XV. inclusive, and simple graphs. Baker's Theoretical Geometry for Schools, to page 72. *In the demonstration of theorems the starting point shall be the definitions given in the prescribed texts.*

Grade XI

1. **Algebra**—Crawford's Algebra (Western Canada Series), review of Chapters I. to XV., and Chapters XVI to XXV. inclusive.

2. **Geometry**—Baker's Theoretical Geometry for Schools to page 206.

In demonstrating a proposition whose proof is given in the prescribed text no use shall be made of a proposition which in the said text follows the required proposition.

In the demonstration of theorems the starting point shall be the definitions given in the prescribed texts.

LATIN

Grades IX and X

Robertson and Carruthers: Latin Lessons for Beginners. Easy continuous prose. Pages 1-244 of the Grammar should be completed.

Grade XI

Translation into English of passages from prescribed texts.

Translation at sight (with the aid of vocabularies wherever necessary) of passages from some easy prose author. Candidates will be expected to have supplemented the reading of the prescribed texts by additional practice in the translation of Latin.

Grammatical questions on the passages from prescribed texts shall be set, and such other questions as arise naturally from the context.

Translation into Latin of easy sentences with the vocabulary based upon the prescribed Caesar.

The following are the prescribed texts:—Caesar: Bellum Gallicum, Book IV., Chapter XX. to end, and Book V., Chapters I. to XXIII inclusive.

Ovid: The following selections from Gleason's "A Term of Ovid"—Atalanta's Race, Death of Orpheus, Touch of Gold.

Collateral Reading: It is recommended that each school provide the following books for reference in connection with the authors read: For the Caesar, Holmes' "Caesar's Conquest of Gaul" (Macmillan & Co., smaller edition); for the Ovid, Gayley's "Classical Myths in English Literature" (Ginn & Co.).

Two papers as follows:—(*a*) Caesar, Ovid and Sight (25 per cent. of the marks on this paper will be for Sight Translation). (*b*) Latin Grammar and Composition. Robertson and Carruthers' Latin Lessons for Beginners should be completed.

GREEK

Grades IX and X

White: First Greek Book (Copp Clark), Exercises 1 to 50, inclusive, pages 1 to 124.

Grade XI

Translation into English of passages from prescribed texts.

Translation at sight (with the aid of vocabularies wherever necessary) of passages from some easy prose author. Candidates will be expected to have supplemented the reading of the prescribed texts by additional practice in the translation of Greek.

Grammatical questions on the passages from prescribed texts shall be set, and such other questions as arise naturally from the context.

Translation into Greek of easy sentences with the vocabulary, based upon the prescribed Xenophon.

The following is the prescribed text: Xenophon, Anabasis I., Chapters 1-8.

For 1922 two papers as follows: (*a*) Xenophon and Sight (25 per cent. of the marks given on this paper will be given for sight translation). (*b*) Greek Grammar and Composition (White's First Greek Book).

FRENCH

Grade IX

A study of Chapuzet and Daniels' Mes Premiers Pas en Français (Heath & Co.), the work in the text to be preceded by and associated with a thorough drill in phonetics. Special attention should be given to reading, memorizing and conversation.

Grade X

(*a*) Grammar.—New High School French Grammar (Fraser and Squair), pages 1 to 115 and Lesson L. Muller's Short Theory of the Conjugation of the French Verb (Copp-Clark).

(*b*) **Composition**—Translation of sentences and easy passages from English into French.

(*c*) **Translation**—It is expected that considerable attention will have been given to practice in reading*, and conversation and that special emphasis will be laid on retranslation, based upon François, Easy French Reading (Holt).

Grade XI

1. (*a*) **Grammar**—New High School French Grammar (Fraser & Squair), chapters 1 to 51 inclusive, and the irregular verbs. Muller's Short Theory of the Conjugation of the French Verb (Copp-Clark).

(*b*) **Composition.**—(1) Translation into French of short sentences as a test of the candidate's knowledge of grammatical forms and structure, and the formation in French of sentences of similar character; and (2) translation of easy passages from English into French.

(*c*) **Sight Translation.**—Translation of unspecified passages from easy French authors.

2. **Authors.**—An examination on the following texts:

1922. Labiche: Le voyage de M. Perrichon (Ginn). La France Héroïque, pages 1-52 (Episodes de la grande Guerre) (Heath).

English Equivalents for French-speaking Students

Au lieu du Français ci-dessus l'Anglais pour les candidats de langue française sera comme suit:

Grades IX and X

Dulac et Bonnet, Grammaire Anglaise, pages 1 à 164.

Grade XI

1. (*a*) **Grammaire.**—Dulac et Bonnet, Grammaire Anglaise, pages 165 à 284.

(*b*) **Composition.**—(1) Traduire du français en anglais quelques phrases assez courtes, qui montrent que le candidat sait appliquer les règles de la grammaire; construire quelques phrases anglaises du même genre. (2) Traduire en anglais quelques passages faciles de prose française.

2. **Auteurs.**—Version tirée d'auteurs anglais faciles à comprendre et non connus d'avance. Examen sur les auteurs prescrits: Dickens—A Christmas Carol. Irving—Sketch Book. (Hachette).

GERMAN

Grades IX and X

(*a*) **Grammar**—High School German Grammar (Van der Smissen and Fraser, revised edition), pages 1 to 133.

(*b*) **Composition**—Translation of sentences and easy passages from English into German.

(*c*) **Translation**—Translation of unspecified passages from easy German authors. In this connection students are expected to have had considerable practice in reading, conversation and easy retranslation. Guerber, Märchen und Erzählungen (Heath) will furnish material.

Grade XI

1. (*a*) **Grammar**—High School German Grammar (Van der Smissen & Fraser, revised edition), pages 1 to 181.

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*As a guide to pronunciation it is recommended that students use "Essentials of French Pronunciation," 1916 edition (Copp, Clark Co.)

(*b*) **Composition.**—(1) Translation into German of short English sentences as a test of the candidate's knowledge of grammatical forms and structure, and the formation in German of sentences of similar character; and (2) translation of easy passages from English into German.

(*c*) **Sight Translation.**—Translation of unspecified passages from easy German authors.

2. **Authors.**—An examination on the following texts:

1922. Hauff: Das Kalte Herz. Benedix: Der Prozess (Copp Clark).

ICELANDIC

Grades IX and X

(*a*) **Grammar**—Jón Olafsson's Móðurmáls-bókin.

(*b*) **Composition**—Translation of easy passages from English into Icelandic and from Icelandic into English. Dictation and orthographical exercises. Construction of sentences to show grammatical forms. Reproduction of stories and original composition.

(*c*) **Literature**—Icelandic Folk-tales: Utilegumannasögur (The Outlaws). Skólaljóð.

N.B.—The following is suggested for the work of Grade IX. in the High School:

Grammar composition and sight reading. Elementary reproduction of stories. Translation of easy Icelandic passages into English. Exercises in orthography. Text: Lesbók III.

Grade XI

1. (*a*) **Grammar.**

(*b*) **Composition.**—(1) Translation into Icelandic of idiomatic expressions and phrases in English. Construction of sentences in Icelandic a test of knowledge of grammatical forms and structure; (2) Sight translation of passages from Icelandic into English. Drill in orthography. Essays.

2. **Authors.**

1922. Melsted's Anthology of Modern Icelandic Literature. Sýnisbók islenzkra bókmenta.

SWEDISH

Grade IX

(*a*) Sundins Svensk språklära to the end of Etymology; easy syntax.

(*b*) Easy selections from modern authors (Folkskolans läsebok, Parts I. and II.).

(*c*) Svensk rättskrivningslära (Wilh. Sturgen-Becker).

Grade X

(*a*) Sundins Svensk språklära is completed.

(*b*) Translation of easy passages from English into Swedish and from Swedish into English.

(*c*) Reproduction of stories and original composition.

(*d*) Selections from modern authors (Folkskolans läsebok, Parts III. and IV.).

Grade XI

1. (*a*) Beckman's Advanced Swedish Grammar.

(*b*) Translation from Swedish into English and from English into Swedish of idiomatic expressions.

(*c*) Writing of short essays.

2. **Authors.**—Translation of selected passages from modern authors; rapid reading; critical study of some masterpiece.

Examination on the following texts:

A. M. Lengren, Pojkarna, Porträtterna, Fröken Juliana; *P. Vikner*, Min moders testamente; *B. E. Malstrom*, Angelika, Vi suckar det så tungt uti skogen?; *Esaias Tegnér*, Flyttfåglarna, Sang till solen, Fridsröster; *Z. Topelius*, Min moder, Vintergatan; *J. L. Runeberg*, Till et fågel, Morgonen, Julkvällen, Soldatgossen, Torparflickan; *Karl XV.*, Hjärtats hem; *Oscar II.*, Ostersjön; *E. Snoilsky*, På Värnamo marknad, Ericsson och Monitor; *G. Froding*, Vallarelåt, Jan Ersa ock Per Persa; *C. D. af Wirsén*, Sikars brunn, Källan, Pelarskogen i San Paolo; *E. Sehlstedt*, Snösparven, Våren kommer, Norrlänningens hemlängtan.

CHEMISTRY

The course as laid down in the High School Chemistry (Revised Edition—Copp-Clark).

PHYSICAL GEOGRAPHY

The course as contained in High School Physical Geography (Macmillan).

MATRICULATION FOR MEDICINE

All students desiring to enter upon a course in Medicine must pass a Junior and a Senior Matriculation examination. For the present, only the subjects of the Junior Matriculation examination for Medicine are taught in the high schools, collegiate institutes and preparatory schools. Instruction in the subjects of Senior Matriculation for Medicine is given in the University and its affiliated colleges.*

Subjects of Junior Matriculation Examination

All candidates at the Junior Matriculation Examination for Medicine must take the following fixed subjects: English, History, Mathematics (Arithmetic, Algebra and Geometry), Latin, Elementary Science (Botany and Physics) and one of the following optional subjects: French, German.

Division of Examination

The subjects enumerated above may be taken in one examination at one time, or in two parts, at successive examinations, as outlined for Arts Matriculation, or they may be taken subject by subject, or by groups of subjects, as in the case of Arts Matriculation.

Scope of Work and Standing Required

In the case of each of the subjects of this examination the work prescribed is the same as that for the corresponding subjects of Parts I and II of the Arts Matriculation Examination, and the same standard is required to entitle the candidate to pass. The same general regulations apply. See pages 23 and 24.

Accuracy in Spelling is required. Students found deficient in this respect will be required to pass an examination in dictation before they will be allowed to proceed with their course. Such students will receive from the Registrar full particulars as to date, place of examination, fee, etc.

Supplemental Examinations

The same regulations respecting Supplemental Examinations prevail as in the case of Arts Matriculation, *except that only fully matriculated students are allowed to proceed with the work of the First Year in Medicine.*

Time of Junior Matriculation Examination

The Junior Matriculation Examination for Medicine is held twice in each year, viz., in June and in September. The June examination is conducted by the Department of Education as in the case of that for Arts Matriculation. See page 25.

Equivalent Examinations

In place of the above Junior Matriculation Examination the University has agreed to accept the Matriculation of the College of Physicians and Surgeons of the Provinces of Quebec and Ontario; the Medical Students' registration certificate of the Medical Council of Great Britain and Ireland.

Non-professional Second-Class Teachers' Certificates of Manitoba, Ontario, Saskatchewan, Alberta and British Columbia are recognized as equivalent to Junior Medical Matriculation in so far as the subjects covered are the same.

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*For the 1922-23 and subsequent sessions, clear standing of two years in Arts and Science (curriculum to be outlined later) will be the Entrance requirements for Medicine.

Holders of certificates of educational value from other institutions than those mentioned will receive such standing as the Council of the University may see fit to grant.

A Bachelor of Arts of any University in His Majesty's Dominions is admitted to the study of Medicine without further examination, provided he has covered work in Science equivalent in range and standard to that prescribed below for Senior Matriculation for Medicine.

Subjects of Senior Matriculation Examination

The subjects of the Senior Matriculation examination for Medicine are:

English: Courses 1, 2, 3, 4, or 9, 10, 11, 12, pages 51-52.
Mathematics: Course 11, page 72*.
Physics: Courses 1, 2, and 3, 4, page 77.
Chemistry: Courses 1, 2, and 21, 22, page 83.
Botany: Courses 1, 2, and 3, 4, page 79.
Zoology: Courses 2, 4, page 89.

And *one* of—

Latin: Courses 1, 2, and 3, 4, page 48.
or French: Courses 5, 6, page 56.
or German: Courses 1, 2, or 3, 4, 5, 6, pages 57-58.

The regulations and standards governing the Senior Matriculation for Medicine are in general the same as those governing the First Year in Arts or Science, for which see page 38 and elsewhere.

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* Course 1, page 72, may be substituted for Course 11 in the case of students not receiving instruction at the University.

MATRICULATION FOR ENGINEERING

All students desiring to enter upon a course in Engineering must pass a Junior and a Senior Matriculation examination for Engineering. For the present, only the subjects of the Junior Matriculation for Engineering are taught in the high schools, collegiate institutes and preparatory schools. Instruction in the subjects of Senior Matriculation for Engineering is given in the University and, in part, in its affiliated colleges.

Subjects of Examination

All candidates at the Junior Matriculation Examination for Engineering take in regular course the following subjects:

1. *English.*
2. *History.*
3. *Mathematics.*
4. *Latin*, or *Greek*, or *French*, or *German.*
5. A language not already taken in "4" above, or two sciences from the following list: Physics, Chemistry, Botany, Physical Geography.
6. Two sciences not already taken in "5" or one science not already taken in "5" with Technical Work (a minimum of one half day a week for three years in a High School recognized for the purpose).

This course is the same as Matriculation for Arts (page 23), except for the restriction provided for in clause "6."

Accuracy in spelling is required. Students found deficient in this respect will be required to pass an examination in dictation before they will be allowed to proceed with their course. Such students will receive from the Registrar full particulars as to date, place of examination, fee, etc.

Supplemental Examinations

The same regulations respecting Supplemental Examinations prevail as in the case of Arts Matriculation. See page 24.

Time of Junior Matriculation Examination

The Junior Matriculation Examination for Engineering is held twice in each year, viz., in June and in September. The June Examination is conducted by the Department of Education as in the case of that for Arts Matriculation. See page 25.

Subjects of Senior Matriculation Examination

The subjects of the Senior Matriculation Examination for Engineering are:

English: Courses 1, 2, 3, 4, or 9, 10, 11, 12, pages 51-52.
Mathematics: Courses 1, 4, 5, 6, 9, 10, page 72.
Chemistry: Courses 1, 2 and 21, 22, page 83.
Mechanical Drawing: Courses 1, 2, page 96.

And *one* of—

Latin: Courses 1, 2, and 3, 4, page 48.
or Greek: Courses 1, 2, or 5, 6, page 45.
or French: Courses 5, 6, page 56.
or German: Courses 1, 2, or 3, 4, 5, 6, pages 57-58.

The regulations and standards governing the Senior Matriculation for Engineering are in general the same as those governing the First Year in Arts or Science, for which see page 38 and elsewhere, except that a minimum of 50 per cent. will be required in all papers in Mathematics and in Mechanical Drawing.

MATRICULATION FOR ARCHITECTURE

In order to enter upon the course of study for the degree in Architecture, the student must pass a Matriculation examination, the subjects of which are the same as those required for Matriculation for Arts or Science. There is required in addition to the above a course in elementary drawing, including the use of instruments, projections and freehand work, of an amount equivalent to a course of eighty hours. Students who apply for admission without this extra requirement will be required to make it up during the First Year. In all other respects the same standards and regulations prevail as in the case of Arts or Science Matriculation.

MATRICULATION FOR LAW

In order to enter upon the course of study for the degree in Law, a student must pass a Junior Matriculation examination, the subjects of which are the same as those required for Matriculation for Arts or Science, except that Latin must be elected, and a Senior Matriculation examination, the subjects of which are the same as those required for the First Year in Arts, except that Latin must be elected, for which see page 37. The same standards and regulations prevail as in the case of Arts or Science Matriculation, and as in the case of First Year in Arts, respectively, but this Matriculation for Law must be clear of all conditions before the student enters upon the First Year of the course.*

ENTRANCE REQUIREMENTS IN OTHER COURSES

Entrance requirements for the courses in Pharmacy are outlined on pages 140-142, those for Agriculture on page 144, those for Home Economics on pages 148-149.

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*For the 1922-23 and following sessions standing of the second year in Arts or its equivalent will be required.

CURRICULA IN ARTS

The University of Manitoba confers two degrees in Arts, viz., Bachelor of Arts (B.A.) and Master of Arts (M.A.). The following are the requisites for proceeding in course to admission to these degrees:

I.—BACHELOR OF ARTS

Matriculation

The requirements for Matriculation for Arts are set forth in detail on pages 23 to 32.

Undergraduate Course in Arts

After having matriculated, the student of Arts is required to pass four examinations before being admitted to the degree of Bachelor of Arts, viz., the First, the Second, the Third and the Fourth Year Examinations.

FIRST YEAR

The course of study in the First Year in Arts is made up of five subjects, to be selected on the following plan (each subject representing four lecture hours per week or their equivalent, a laboratory period of either two or three hours to count as one lecture hour):

1. English (Courses 9, 10, 11, 12, page 52).
2. Mathematics (Courses 1, 4, page 72).
3. A foreign language (already taken for Matriculation), either Latin (Courses 1, 2, 3, 4, page 48); or Greek (Courses 3, 4, page 45); or French (Courses 1, 2, 3, 4, page 55); or German (Courses 3, 4, 5, 6, page 58).
4. Any *two* of the following* (the language already taken in 3 being barred): Latin (Courses 1, 2, 3, 4, page 48); Greek (Courses 1, 2 or 3, 4, page 45); Biblical Greek† (Courses 1, 2, page 47); French (Courses 1, 2, 3, 4, page 55); German (Courses 3, 4, 5, 6, page 58); Elementary German‡ (Courses 1, 2, page 57); Hebrew (Courses 1, 2, page 49); Icelandic (Courses 1, 2, 3, 4, page 59); History (Courses 1, 2, page 66); §Mathematics (Courses 5, 6, 7, 10, page 72); Physics (Courses 1, 2, 3, 4, page 77); Chemistry (Courses 1, 2, 21, 22, page 83).

N.B.—The subjects of the above curriculum will be grouped for time-table purposes by the University Faculty as follows, the groups being kept clear of conflicts with one another, but not necessarily the subjects within the groups: (a) English; (b) Mathematics (required); (c) Latin, Chemistry; (d) French, Icelandic, Hebrew; (e) German, Greek; (f) History, Mathematics (optional); (g) Physics.

SECOND YEAR

The course of study in the Second Year in Arts is made up of five subjects, to be selected on the following plan (each subject, except History, representing four lecture hours per week or their equivalent, a laboratory period of either two or three hours to count as one lecture hour, and History being allotted three lecture hours per week):

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*A student who has not taken both Physics and Chemistry for Matriculation must elect one Science subject in either the First or the Second Year.

†This option is open only to those who have not taken Matriculation Greek.

‡This option is open only to those who have not taken Matriculation German.

§Students intending to take in their Third Year, Mathematics, or any division of the Natural and Physical Science involving Physics, are recommended to choose Mathematics as an option in First Year.

1. English (Courses 13, 14, 15, 16, page 52).

2. History (Courses 3, 4, page 67).

3. A foreign language (already taken for Matriculation, and in the First Year), either Latin (Courses 5, 6, 7, 8, page 48); or Greek (Courses 7, 8, page 45); or French (Courses 7, 8, 9, 10, 11, 12, 13, 14, page 56); or German (Courses 7, 8, 9, 10, page 58).

4. Any *two* full subjects* or their equivalent, from the following list, subject to the time-table and other limitations below (the language already taken in 3 above being barred): Latin (Courses 5, 6, 7, 8, page 48); Greek (Courses 3, 4, *or* 5, 6, page 45); Biblical Greek (Courses 3, 4, page 47); French (Courses 7, 8, 9, 10, 11, 12, 13, 14, page 56); German (Courses 7, 8, 9, 10, page 58); Hebrew (Courses 3, 4, page 50); Icelandic (Courses 5, 6, 7, 8, page 59); Psychology and Ethics (1921-22 Courses 1, 2, 1b, 2b, page 59); Economics (Courses 1, 2, page 69); Mathematics† (Courses 13, 16, page 72); Astronomy, half-subject only (Courses 91, 92, page 75); Physics (Courses 9, 10, and selected parts of 17, 18, 19, 20, page 77); Botany‡, half-subject only (Courses 1, 2, 3a, 4a, page 79); Geology‡, half-subject only (Courses 1, 2, 3, 4, page 81); Chemistry‡ (Courses 1, 2, 21, 22, page 83); Zoology‡, half-subject only (Courses 1, 2, 3, 4, page 89).

N.B.—The subjects of the above curriculum will be grouped for time-table purposes by the University Faculty as follows, the groups being kept clear of conflicts with one another, but not necessarily the subjects within the groups: (a) English; (b) History; (c) Latin, Physics; (d) French, Hebrew, Icelandic; (e) German, Greek, Geology with Astronomy; (f) Economics, Chemistry; (g) Psychology and Ethics, Botany with Zoology, Mathematics.

Students proceeding to the Latin Philosophy Course in St. Boniface College take a special Second Year Course outlined on pages 64 and 66.

A candidate, in order to pass in any paper at the examination of the First or the Second Year, must have 40 per cent. of the marks in that paper, and to pass the whole examination and obtain Third Class standing he must have 40 per cent. of the aggregate of the marks assigned and may not have failed on more than three full papers or their equivalent. If he fail to obtain 40 per cent., he shall be required to take the whole examination again. To obtain Second Class standing he must have 50 per cent. of the aggregate of the marks assigned. To obtain First Class standing, grade B, he must have 67 per cent. of the aggregate of the marks assigned. To obtain First Class standing, grade A, he must have 80 per cent. of the aggregate of the marks assigned.

The standing of a candidate on an individual subject is determined on the same basis as his standing on the whole examination.

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*A student who has not taken both Physics and Chemistry for Matriculation must elect one Science subject in either the First or the Second Year.

†Mathematics is a prerequisite for Divisions A and B of the course in Natural and Physical Science.

‡ See outline of the divisions of the Natural and Physical Science Course, for which these courses are prerequisites.

Chemistry will be permitted as an option only in case it has not been taken in the First Year.

Candidates who have failures registered against them in not more than two full papers, or four half papers or their equivalent, in the examination of the First Year or the Second Year may, as conditioned students, proceed with their course, with a view to subsequently obtaining the full standing of the year; but all conditions from the examination of the First Year must be removed before the commencement of the Third Year, and all conditions from the examination of the Second Year must be removed before the commencement of the Fourth Year.

These regulations should be read in conjunction with the regulations relating to Supplemental Examinations. (See pages 158-161.)

A student passing the examination of the First Year with First Class grade "B" or higher standing, may obtain from the Department of Education for Manitoba a First Class non-professional Teacher's Certificate. A student passing with Second Class standing may obtain a Second Class non-professional certificate. In each case the applicant for a certificate must satisfy the requirements of the Department in Bookkeeping, Agriculture, Music, Drawing, Botany and Geography.

No student shall be allowed to present himself for examination in any subject of the First or Second Years in Arts unless he presents from the University Faculty a certificate of having attended 75 per cent. of the lectures delivered in said subject, or is recommended for the examination by an affiliated college. This regulation, however, shall not affect any extra-mural candidate for examination.

THIRD AND FOURTH YEARS

After completing the First and Second Years, a student may proceed to the degree of Bachelor of Arts by pursuing any one of the following Courses, viz.:

(a) A General Course. All students who elect the General Course must take two subjects from Group A below and one subject from each of Groups B, C and D:

Group A—English, French, German, Latin, Greek, Hebrew.
Group B—Philosophy, Political Economy and History.
Group C—Physics, Chemistry, Biology, Astronomy with Geology.
Group D—An additional subject from Group A, an additional subject from Group B, an additional subject from Group C, Mathematics, Scripture.

(b) A Group Course, made up on the following plan[*]: Any two *majors*, or a *major* and two *minors*[†], from the following list—Classical Greek (major and minor), Biblical Greek (minor only), Latin (major and minor), Hebrew (major), English (major and minor), French (major and minor), German (major and minor), Philosophy (major and minor)[‡], History (major and minor), Political Economy (major and minor), and Mathematics (major and minor)[‡], Finance (minor in Fourth Year only).

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[*] Owing to the numerous combinations of subjects allowed in the Third and Fourth Years under the system of group courses it is impossible in the present length of the teaching week to make provision for all such combinations. The University, therefore, while endeavoring to provide for all the various courses selected by students, will, in drawing up the time-table, have regard especially to the avoidance of conflicts between courses selected from the following groups:

(*a*) English, Latin, Greek, French, German, Hebrew; (*b*) English, History, Political Economy, Philosophy; (*c*) Natural and Physical Sciences, Mathematics, Political Economy.

[†] A student pursuing the work of a Group Course must in the Fourth Year continue the subjects begun in the Third Year, except that a student taking in the Third Year a major and two minors may, in the Fourth Year, for the two minors substitute a major in one of them. An exception to this rule is made in the case of the Finance Minor of the Fourth Year, which may be taken by any student who has taken in the Third Year a major or a minor in Political Economy or a major, minor or the full course in Mathematics and Physics.

[‡] In Philosophy additional work is provided that is the equivalent of a major so that a full course may be taken in this subject.

Additional work is provided by the Department of Mathematics and Astronomy which together with certain courses given by the Physics Department are equivalent to a major. See pages 76 and 78.

(c) A Course in Philosophy.
(d) A Course in Latin Philosophy.
(e) A Course in Mathematics and Physics.
(f) A Course in Natural and Physical Science.

(Any one of four divisions.)

	Third Year	Fourth Year
Division A	Mathematics Physics Chemistry Geology and Mineralogy	Mathematics Physics, and either Chemistry or Geology and Mineralogy
Division B	Mathematics Physics Chemistry Astronomy	Mathematics Physics Astronomy
Division C	Physics Chemistry Any two of Botany, Geology and Mineralogy, Zoology	Physics Chemistry Any one of Botany, Geology and Mineralogy, Zoology
Division D	Botany Zoology Geology and Mineralogy Chemistry	Botany Zoology Geology and Mineralogy

For details as to the content of the above courses consult the outlines given under the various departmental captions, following the indication as to pages given below.

Subjects	Courses into Which They Enter	Pages
Classical Greek	Major, Minor, General	45
Biblical Greek	Minor	47
Latin	Major, Minor, General	48-49
Hebrew	Major, General	49-51
English	Major, Minor, General	51-55
French	Major, Minor, General	55-57
German	Major, Minor, General	57-59
Philosophy	Full Course, Major, Minor, General	59-60
Latin Philosophy	Full Course, General	61-66
History	Major, Minor, General	66-68
Political Economy	Major, Minor, General, Finance Minor	69-71
Mathematics	Full Course, Major, Minor, General, Finance Minor, Natural and Physical Science, Divisions A and B	72-76
Physics	Mathematics and Physics Course, Natural and Physical Science, Divisions A, B, C and General Course	77-78
Botany	Natural and Physical Science, Divisions C, D, General	79-80
Geology and Mineralogy	Natural and Physical Science, Divisions A, C and D, General	81-82
Chemistry	Natural and Physical Science, Divisions A, B, C, D, General	83-84
Zoology	Natural and Physical Science, Divisions C and D, General	89-90

II.—MASTER OF ARTS

The following are the requirements for the Degree of Master of Arts (M.A.):

1. A candidate for the degree of Master of Arts shall hold the degree of Bachelor of Arts from the University of Manitoba or an equivalent degree from this or another recognized University.

2. Two subjects, not necessarily in different departments, shall be taken. One of these shall be designated as the major subject and special attention shall be devoted to it. It shall be a subject which the student has already pursued in the Third and Fourth Years of his undergraduate course. The Minor subject shall be selected from a group related to the major subject. Not more than one-third of the student's time should be devoted to the minor subject.

3. The student shall submit a satisfactory thesis on some topic connected with his major subject.

4. The student shall pursue his work under the direction of two or more instructors of whom at least one shall be a member of the University Faculty, and his election of the Major and Minor courses and the subject of the thesis after being approved by the Departments in which his work will lie, must be submitted to the University Faculty of Arts and Sciences and the Board of Studies.

5. The minimum period spent in study for the M.A. degree shall be one academic year for students giving their whole time to the work. The minimum period for students not giving their whole time to M.A. work shall be two academic years, except in the case of students who attend a summer session in graduate work at some institution, acceptable to the Departments concerned, when the minimum time may be reduced to one year on recommendation of those Departments. Students required to take two years for this degree must receive standing on at least one-third of their work for the degree before entering upon their final year. The library conditions under which extra-mural students pursue their work should be satisfactory to the Departments concerned.

6. The Committee which shall pass upon the merits of the thesis shall consist of the instructors under whose direction the candidate's work has been performed, and at least one other recommended by the University Faculty of Arts and Sciences. The candidate shall pass such written examinations at such times and under such conditions as the committee may decide, and also undergo a final oral examination and public defence of the thesis, conducted by the committee.

7. The thesis shall be submitted at least ten days before the time of the oral examination. At least four printed or typewritten copies are required, three of which shall be deposited in the Library. It is desirable that uniformity in style, format, etc., be observed and in reference to these matters the candidate should consult the Registrar.

For the present the course of study in any department for the M.A. degree will in the main be outlined on request by the instructors in that department, and adapted to suit the needs, capabilities and previous training of the applicant. Request therefor should be made to the Board of Studies, and the Board must also approve the course after it is outlined. A limited number of M.A. courses are prepared in advance, and these are listed along with the undergraduate courses of the same department elsewhere in this Calendar.

CURRICULA IN SCIENCE

The University of Manitoba confers two degrees in Science, viz., Bachelor of Science (B.Sc.) and Master of Science (M.Sc.). The following are the requisites for proceeding in course to admission to these degrees:

I.—BACHELOR OF SCIENCE

Matriculation

The requirements for Matriculation for Science are set forth in detail on pages 23 to 32.

Undergraduate Course in Science

After having matriculated, the student of Science is required to pass four examinations before being admitted to the degree of Bachelor of Science, viz., the First, the Second, the Third, and the Fourth Year Examinations.

FIRST YEAR

Course Nos.	Page	SUBJECT	Fall Term		Spring Term	
			Lecture Hours per week	Lab. Hours per week	Lecture Hours per week	Lab. Hours per week
1, 2; 3, 4	51	English	4		4	
1; 4; 5, 6	72	Mathematics	6		6	
1, 2; 3, 4	77	Physics	3	2	3	2
3, 4; 21, 22; 25, 26	83-84	Chemistry	3(+1)	6	3(+1)	6
		One of—				
5 6,	56	French	3		3	
1, 2, or 3, 4, 5, 6	57-58	German	4		4	

SECOND YEAR

Course Nos.	Page	SUBJECT	Fall Term Lecture Hours per week	Fall Term Lab. Hours per week	Spring Term Lecture Hours per week	Spring Term Lab. Hours per week
9, 10; 17, 18	77	Physics	3	3	3	3
3, 4; 25, 26	83-84	Chemistry	3	6	3	6
7, 10, 13, 16	72	Mathematics I	6		6	
		Or two of—				
1, 2; 3, 4	89	Zoology	2	2	2	2
1, 2; 7, 8	79-80	Botany	2	2	2	2
1 ,2; 7, 8	81	Geology	2	2	2	2
7, 16	72	Mathematics II	2		4	

THIRD YEAR

Course Nos.	Page	SUBJECT	Fall Term Lecture Hours per week	Fall Term Lab. Hours per week	Spring Term Lecture Hours per week	Spring Term Lab. Hours per week
		Any three of—				
29, 30, 55, 56	73-74	Mathematics	5		5	
31, 54, 91, 92, 93, 96	73-75	Astronomy	6	1	5	1
27, 28; 19, 20	77-78	Physics	3	3	3	3
7, 8; 11, 12 33, 34	83-84	Chemistry	4	9	4	9
9, 10; 11, 12; 14	80	Botany	3	5	4	5
17, 18; 19, 20; 21; 22; 24	89-90	Zoology	4	6	4	6
11, 12; 13, 14, 19, 20; 22	81	Geology	5	2	4	5
9, 10, 13 1, 2, 5, 6	85-86 88	Physiology and Biochemistry (one subject)	3	6	3	6
To be outlined		Anatomy	2	13	2	12

FOURTH YEAR

Students of the Fourth Year in Science will take two subjects selected from one of the following groups:

A.—Mathematics, Physics, Chemistry, Geology.

B.—Botany, Zoology, Geology, Chemistry.

C.—Zoology, Physiology, Biochemistry, Anatomy.

D.—Physiology or Biochemistry, and Chemistry, or Botany, or Physics.

The two subjects selected must have been taken already in the Third Year.

Course Nos.	Page	SUBJECT	Fall Term Lecture Hours per week	Fall Term Lab. Hours per week	Spring Term Lecture Hours per week	Spring Term Lab. Hours per week
39, 40, 61, 62*	73-74	Mathematics	4	8	4	8
29, 30; 25, 26; 31, 32	78	Physics				
19, 20 and two of 13, 14: 15, 16; 17, 18 and 35, 36; and one of 37, 38; 39, 40	83-84	Chemistry	5	11	5	11
15, 16; 17, 18	80	Botany	4	9	4	9
17, 18; 19, 20; 21; 22; 24	89-90	Zoology	3	6	3	8
15, 16; 17, 18; 23, 24	81-82	Geology	4	11	4	11
11, 12; 14; 19, 20	86	Physiology (*one subject, including*	1	10	1	10
3, 4, 7, 8,	88	Biochemistry)†	1	3	1	3
3, 4, 7, 8, 9, 10	88	Biochemistry) *one subject, including*	1	10	1	10
11, 12, 14		Physiology)†	1	3	1	3

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* And others to be outlined.

†Students electing Physiology and Biochemistry in the Third Year are required to take in addition a short course in Histology and Practical Histology.

Students electing Physiology in the Fourth Year must take the courses in Biochemistry in Third Year Medicine as part of their course in Physiology.

Students electing Biochemistry in the Fourth Year must take the courses in Physiology in Third Year Medicine as part of their course in Biochemistry.

Students electing both Physiology and Biochemistry in the Fourth Year must put in extra time in these subjects equivalent to the courses common to the two subjects.

The courses in Physiology and Biochemistry will be altered in 1923-24 to conform with the new course in Medicine.

II.—MASTER OF SCIENCE

The following are the requirements for the Degree of Master of Science (M.Sc.):

1. The candidate for the degree of Master of Science:

(*a*) Shall hold the degree of B.Sc. of the University of Manitoba or possess such qualifications as the Board of Studies after reference to the University Faculty of Arts and Sciences may deem to be the equivalent of this degree.

(*b*) Shall pass an examination in two courses of study, one closely related to the subject of his thesis and the other in an allied subject, and all his work shall be done under the direction of at least two members of the University Faculty of Arts and Sciences. One of these subjects shall be taken in the department in which the thesis falls, the other may be taken in the same or an allied department.

(*c*) Shall submit a satisfactory thesis based upon original work done under the direction of the department in which he has elected to do his research.

(*d*) Shall have completed at least one year's graduate work in one or more of the following departments of the University of Manitoba: Mathematics, Physics, Chemistry, Geology, Botany, Zoology, Physiology, Bio-Chemistry, Anatomy.

A graduate of this University may be permitted to meet the requirements of this clause by courses of study taken in another University if such work be approved by the Board of Studies after reference to the University Faculty of Arts and Sciences.

2. (*a*) The candidate shall make written application to the Board of Studies for permission to enter on a course leading to this degree. The outline of this course, drawn up in consultation with the University Faculty of Arts and Sciences, must receive the approval of the Board of Studies.

(*b*) The nature of the thesis shall subsequently receive the approval of the Board of Studies after reference to the University Faculty of Arts and Sciences.

3. Candidates possessing the necessary qualifications who serve for at least one entire session on the teaching staff of a Science Department of the University may on the recommendation of the University Faculty of Arts and Sciences be given credit for not more than one-third of the course of study usually given.

4. For the examination of each candidate the examining board shall consist of the Instructors under whose direction the work has been performed and one other recommended by the University Faculty of Arts and Sciences.

5. At least four printed or typewritten copies of the thesis shall be submitted by the candidate. One of these shall subsequently be deposited in the University Library. It is desirable that uniformity in style, format, etc., be observed and in reference to these matters the candidate should consult the Registrar.

Courses in Arts and Science in Detail

DEPARTMENT OF CLASSICS

F. W. Clark, B.A., Ph.D.	*Professor of Latin and Greek*
Very Rev. G. F. Coombes, M.A., D.D.	*Professor of Latin and Greek*
J. W. Taylor, M.A., Ph.D.	*Assistant Professor of Greek and Latin*
W. M. Hugill, B.A.	*Assistant Professor of Greek and Latin*

N.B.—For key to system of numbering courses, see page 4.

CLASSICAL GREEK

*1. **Beginner's Greek Course.** This course is intended for students who have not had the opportunity of taking Greek for Matriculation. The purpose is to prepare students as rapidly as possible for the reading of Greek. Gleason's Greek Primer (American Book Co.), Lessons 1-XXXV. Four hours a week.

*2. **Beginner's Greek Course.** Continuation of Course 1. Gleason's Greek Primer, Lessons LVIII–LXI, LXVIII, LXIX, LXXI, LXXII, and Colson's Greek Reader (Macmillan & Co.), selections from Parts I-IV. Four hours a week.

3. **Greek Authors.** This course is intended for those who have entered the University with Matriculation in Greek or who have completed Courses 1 and 2. Colson's Greek Reader, (Macmillan & Co.), Part VIII will be read. Easy sight translation. Four hours a week.

4. **Greek Author.** Continuation of Course 3. Euripides' *Hecuba*, (Bond and Walpole, Macmillan Elementary Classics), will be studied, with the exception of the choral odes, which will be read in translation. Easy sight translation. Four hours a week.

5. **Greek Author.** Plato: *Apology* and *Crito*. Dwyer-Seymour (Ginn & Co.). Easy sight translation. Four hours a week.

6. **Greek Author.** Homer, *Iliad*. Selections from first three books. Sterrett (American Book Co.). Easy sight translation. Four hours a week.

7. **Herodotus.** Book VII, 201 to end and Book VIII. Aeschylus' *Persae* in translation. Three hours a week.

8. **Aristophanes.** The *Birds*, omitting ll. 801-1057, and the *Clouds*. (Merry's edition of both plays. Oxford Press.) Study of the origin, structure and content of Old Attic Comedy. Three hours a week.

9a. **Homer.** *Odyssey* I, VII, VIII, 1-235 and 385 to end, IX, XIII, XVI, XXIII. The Homeric age and Homeric problem. Sight translation. Three hours a week.

9b. **Homer.** The *Iliad*. (Not given in 1921-1922.)

10a. **Plato.** *Republic* I-IV, omitting I, 6-9, 13-15, 20-24; II, 17-21 and III, 1-11. Emphasis will be laid on the ethical and political content and its application to modern social and political problems. Sight translation. Three hours a week.

10b. **Selections in Prose.** Text: Poynton's Flosculi Graeci. (Not given in 1921-1922.)

11. **Thucydides.** *Peloponnesian War*, VII. Special attention will be given to the historical and literary value of the work. Two hours a week.

12. **Greek Tragedy.** Sophocles' *Antigone* and Euripides' *Medea*,

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*By giving proof to the department that they have done sufficient work in the vacation to warrant it, students who have taken courses 1 and 2 may proceed with the regular work of the Second Year (5 and 6) or students who have completed 1, 2, 3, 4 may, on similar conditions, go on with the major or minor work of the Third Year.

omitting the choral odes, which will be read in English. History of Greek Tragedy. Two hours a week.

13. **Greek History.** Bury's *History of Greece*, chapters IV (p. 180) to IX. Lectures and readings on the period from 500 B.C. to 431 B.C. The Persian Wars, the development of the democracy in Athens and the growth of the Athenian Empire. Special topics and papers will be assigned. One hour a week.

14. **Greek History.** Continuation of 13, involving a study of Bury's *History of Greece*, chapters X to XVI. Lectures and readings on the period from 431 B.C. to 338 B.C. The Peloponnesian war, the Spartan and Theban hegemonies, the rise of Philip of Macedon. Special topics and papers will be assigned. One hour a week.

15. **Greek Antiquities.** (Not given in 1921-1922).

16. **Greek Antiquities.** Continuation of 15. (Not given in 1921-1922.)

17. **Greek Poetry in Translation.** The following works will be studied:

Pindar—*Pythian Odes* 4, 9; *Olympian Odes*, 7, 10, 13; *Nemean Odes*, 10 (Translation by Sandys in Loeb Library).

Aeschylus—*Choephori* (Tucker), *Prometheus Bound* (Golden Treasury Series).

Sophocles—*Electra*, *Oedipus Tyrannus* (Jebb).

Euripides—*Electra* (Murray), *Bacchae* (Way).

Aristophanes—*The Frogs* (Rogers).

Bucolic Poets—Theocritus, *Idylls* 1, 2, 7, 15, and *Epigrams* 1-24; Moschus, *Europa*. (Edmonds in Loeb Library.)

Greek Anthology—Selections. (Paton in Loeb Library.)

One hour a week.

18. **Greek Prose Authors in Translation.** The following works will be studied: Thucydides, *Peloponnesian War*, I, II, 34-54, V, 84-116 (Jowett). Demosthenes, *On the Crown*, *The Olynthiacs* (Kennedy). Plato, *Phaedo*, *Crito*, *Republic* V, X (Jowett). Aristotle, *Politics* III, VIII (Welldon); *Ethics* I, II (Williams); *Poetics* (Cooper). Theophrastus, *Characters* (Jebb). Lucian, *The Dream*, *Timon*, *A True Story* (Harmon in Loeb Library). Plutarch, *Morals*, vol. I. The account of the Laws and Customs of the Spartans and vol. V, That Brute Beasts Make Use of Reason (Goodwin). One hour a week.

19. **Thucydides.**

20. **Greek Philosophy.**

Senior Matriculation: Courses 1, 2, *or* 3, 4.
First Year, Arts: Courses 1, 2 *or* 3, 4.
Second Year, Arts: Courses 3, 4, *or* 5, 6.
Third Year, Arts: Major: Courses 7, 8, 9a, 10a, 13, 14.
Minor: Courses 9a, 10a, 13, 14.
General: Courses 9a, 10a.
Fourth Year, Arts: Major: Courses 9a, 10a, 11, 12, 13, 14, 17, 18.
Minor: Courses 9a, 10a, with *either* 13, 14 *or* 17. 18
General: Courses 9a, 10a.
Graduate Courses: 19, 20.

BIBLICAL GREEK

(*Courses 1, 2, 3, 4, 7, 8, 11, 12 are given only in the affiliated Colleges; courses 5, 6, 9, and 10 are given in the University.*)

1, 2. **Biblical Greek I.** Moulton's First Greek Reader in New Testament Greek will be covered together with the corresponding sections of Moulton's Introduction to New Testament Greek. First term: Moulton's Introduction, Exercises 1 to 27; Second term: Moulton's Introduction completed. Four hours a week.

3, 4. **Biblical Greek II.** The Book of Acts will be read and training in continuous Greek composition will be given, based on the text read, and with reference to Burton's New Testament Moods and Tenses. Exercises in sight translation of simple Hellenistic Greek will be given from time to time. First term: Acts 1-14. Second term: Acts 15-28. Four hours a week.

5. **Synoptic Gospels.** The course will consist of the reading of the Synoptic Gospels in Greek with brief introductory and explanatory notes. Three hours a week. (Not for 1921-1922.)

6. **Pauline Epistles and Apocrypha.** Reading of Romans, Corinthians 1 and 2, Galatians, Thessalonians 1 and 2, Maccabees 1, Judith and the Wisdom of Solomon, with brief introductory and explanatory notes. Three hours a week. (Not for 1921-1922.)

7. **History of New Testament Times.** The period covered is 165 B.C. to 135 A.D. The prescribed text is W. D. Morrison's The Jews under the Roman Empire (Stories of the Nations). One hour a week.

8. **Pauline Epistles and Apocrypha.** A course complementary to Course 6. Lectures and reading on the "Introduction" to books read in Course 6. Case, Environment of Early Christianity and Charles, Between the Old and New Testaments, will form the basis of study. One hour a week.

9. **New Testament Epistles and Patristics.** Reading of Philippians, Philemon and Hebrews; also Justin Martyr's Apologies 1. The edition of the latter by Gildersleeve (American Book Co.) is recommended. Three hours a week.

10. **New Testament Epistles and Apocrypha.** Reading of Timothy 1 and 2; James; Peter 1; and John 1, 2 and 3; also of Ecclesiasticus (The Wisdom of Jesus the Son of Sirach). Three hours a week.

11. **Primitive Christianity.** Harnack's Mission and Expansion of Christianity, Vol. 1. (Putnam), will form the basis of study. Lectures and reading. One hour a week.

12. **The Graeco-Roman World.** Cumont's Oriental Religions in Roman Paganism (Open Court, Chicago), will form the basis of study. Lectures and reading. One hour a week.

First Year, Arts:	Courses 1, 2.
Second Year. Arts:	Courses 3, 4.
Third Year, Arts:	Minor: Courses 7, 8, 9, 10.
Fourth Year, Arts:	Minor: Courses 9, 10, 11, 12.

Courses 1 and 2 (and consequently also 3 and 4) are open only to such students as have not taken Greek for Matriculation.

Nestle's New Testament in Greek and the British and Foreign Bible Society's Old Testament in Greek are convenient texts which can be easily secured. Where annotated texts are desired, the editions of the books read in the Cambridge Bible in Greek will be found useful.

LATIN

1. **Prose Composition.** Bradley-Arnold Latin Composition. Exercises 1-12, omitting 4. One hour a week.

2. **Prose Composition.** Bradley-Arnold continued. Exercises 14-24, omitting 19. One hour a week.

3. **Prose Authors and Sight Translation.** Text: A Latin Reader, by A. Petrie (Oxford Press). Selections 10-15 and 32-38 will be studied. Three hours a week.

4. **Verse and Sight Translation.** Text: A Latin Reader, by A. Petrie (Oxford Press). Study of the following selections from Vergil and Ovid: 91-100, 102, 103, 124, 125, 129-131, 139. Three hours a week.

5. **Prose Composition.** Bradley-Arnold Latin Composition. Exercises 41-55, omitting 43, 44, 47, 48, 51. One hour a week.

6. **Prose Composition.** A continuation of Course 5. Exercises 56-65, omitting 62. One hour a week.

7. **Prose Authors and Sight Translation.** Text: A Latin Reader, by A. Petrie (Oxford Press). Study of the following selections from Sallust, Livy and Pliny: 46, 49-66, 68, 69, 71, 72. Three hours a week.

8. **Verse Authors and Sight Translation.** (*a*) Selections from Catullus and Horace as found in Petrie's Latin Reader (Oxford Press). (*b*) Selected Epigrams from Martial by Post (Ginn & Co.). The following epigrams amounting to about 450 lines will be read. Book I: 3, 9, 10, 13, 16, 29, 32, 38, 47, 75, 79, 98. Book II: 5, 11, 16, 41, 69, 80, 88, 90. Book III: 12, 14, 15, 35, 38, 44, 52, 63. Book IV: 15, 41, 44. Book V: 8, 9 29, 34, 43, 47, 49, 56, 58. Book VI: 8, 17, 28, 48. Book VII: 3, 83, 92. Book VIII: 9, 10, 12, 17, 69, 76. Book IX: 10, 15, 46, 68, 81, 97. Book X: 39, 47, 61, 62, 74, 96, 104. Book XI: 35, 84. Three hours a week.

9, 10. **Prose Composition and Sight Translation.** Translation into Latin of representative passages from English authors. Practice in sight translation. One hour a week.

11. **Roman Elegiac Poetry.** (*a*) Select Poems of Catullus by Simpson (Macmillan), Nos. 1, 2, 4, 7, 9, 11, 13, 14, 22, 30, 34, 38, 43, 45, 50, 53, 61, 62, 64, 65, 72, 75, 83, 87, 92, 96, 107, 109. (*b*) Roman Elegiac Poets by Harrington (American Book Co.). Tibullus: I, 1, 3, 10; II, 1, 2, 5. Propertius: I, 1, 2, 8, 8b, 22; II, 10, 11, 12, 13, 31; III, 1, 3, 7, 9; IV, 6, 11. Ovid, Amores: I, 1; 3, 15; II, 6, 16; III, 9, 15. Two hours a week.

12. **Caesar.** Study of the career of Caesar, with the reading of Bellum Gallicum, Book V, 1-23; Book VI, 13-29; Book VII, 1-31; 57-90; and of Bellum Civile, Book III, 1-33; 58-75; 82-112. For reference, Warde Fowler's Caesar (Heroes of the Nations Series; G. P. Putnam's Sons). Two hours a week.

13. **Cicero, Pliny and Erasmus.** A study of epistolary Latin. (*a*) Cicero: Selected Letters (Abbott, Ginn & Co.). Epistles 12, 13, 25, 36, 40, 41, 49, 50, 60, 63, 72, 73, 74, 75, 76, 78, 80, 83, 86, 87, 90, 91, 92, 95, 97. (*b*) Pliny: Selected Letters (Allen, Oxford Press). Epistles I, 13, 15; II, 6, 20; III, 16, 21; IV, 13, 19. VII, 9; VIII, 16. IX, 23; X, 33, 34, 96, 97. (*c*) Erasmus: Selections (Allen, Oxford Press) Nos. 3, 5, 6, 8, 20, 26, 27. Three hours a week.

Private reading for Fourth Year only. (*a*) Cicero Nos. 16, 51, 64, 100. (*b*) Pliny, I, 6; III, 5; VI, 16; VII, 27; IX, 6, 36. (*c*) Erasmus, 10.

13b. **Cicero.** Orations. (Not given in 1921-1922.)

14. **Horace.** A study of the life and poetry of Horace with the reading of (*a*) Odes I, 1-4, 9-12, 14, 18, 21, 22, 24, 34, 37, 38; II, 1-3, 7, 10, 13-17;

III, 1, 2, 5, 6, 8, 9, 13, 14, 18, 21, 23, 29, 30; IV, 3, 5, 7, 15. (*b*) Satires I, 1, 5, 9. (*c*) Epistles, I, 1, 2, 6, 7, 10, 11 ,13, 14, 20. Three hours a week.

Private reading for Fourth Year only: (*a*) Odes I, 5, 28; III, 3, 4, 16; (*b*) Epodes 2, 16. (*c*) Satires, I, 6; II, 1.

14b. **Vergil.** Selections. (Not given in 1921-1922.)

15. **Lucretius.** Study of the philosophy and literary art of Lucretius. Reading of Book I, 1-634; Book III, 1-349 and 830 to end; Book V, 1-431 and 728 to end. Two hours a week.

16. **Tacitus.** The Agricola and the following selections from the Annals: XIII, 1-24; XIV, 1-59; XV, 33-74. Two hours a week.

For private reading: Annals, XIII, 6-10; XIV, 40-59; XV, 33-37.

17. **Roman Antiquities.** Course of lectures, illustrated by lantern slides, particularly on Roman Private Life. The topics discussed will in the main be those treated in Fowler's Social Life at Rome in the Days of Cicero and in Tucker's Life in the Roman World of Nero and St. Paul. Other books valuable for reference are: Johnston, Private Life of the Romans; Jones, Companion to Roman History; Friedlaender-Freese, Roman Life and Manners under the Early Empire.; Huelsen-Carter, The Roman Forum; Platner, Ancient Rome. One hour a week.

18. **Latin Literature.** A course designed to give students a general view of Latin Literature. Particular stress will be laid on authors which are not studied in the regular reading courses. Representative selections will be read in the best English translations. One hour a week.

19, 20. **Roman History.** A study of the period from 133 B.C. to 37 A.D. Pelham: Outlines of Roman History will serve as the basis for the course. Study of special topics in Mommsen; Taylor, Constitutional and Political History of Rome; Capes, Early Roman Empire; Shuckburgh, Life of Augustus. One hour a week. (Not given in 1921-1922.)

21. **Vergil.** Eclogues, Georgics, Aeneid.

22. **Tacitus.** Annals, I-VI.

23, 24. **Latin Prose.**

Senior Matriculation: Courses 1, 2, 3, 4.
First Year, Arts: Courses, 1, 2, 3, 4.
Second Year, Arts: Courses 5, 6, 7, 8.
Third Year, Arts: Major: Courses 9, 10, 11, 12, 13, 14, 17, 18.
  Minor: Courses 13, 14, with *either* 9 and 10 *or* 17, 18.
  General: Courses 13, 14.
Fourth Year, Arts: Major: Courses 9, 10, 13, 14, 15, 16, 17, 18.
  Minor: Courses 13, 14 with *either* 9 and 10 *or* 17, 18.
  General: Courses 13, 14.
Graduate Courses, 21, 22, 23, 24.

HEBREW

Instruction in Hebrew is provided only in the affiliated Colleges.

1, 2. Inductive study of the Hebrew language, including the fundamental principles of the grammar, the acquisition of a vocabulary, and translation of English into Hebrew. Harper, Elements of Hebrew and Introductory Hebrew Method and Manual. First term: Lessons 1-15. Second term, Lessons 16-29. Four hours per week.

3, 4. Continuation of Courses 1 and 2. Harper, Elements of Hebrew and Introductory Hebrew Method and Manual; Harper's or Davidson's Elements of Syntax. First term: Lessons 30-40. Second term: Lessons 41-50, and Book of Jonah, with special reference to syntax and vocabulary. Four hours per week.

5. **Old Testament History.** Paton, History of Syria and Palestine, Chapters 1-9. Summer reading: English Bible, Genesis, Exodus, Leviticus, Numbers, Joshua, Judges, I Sam. 1-7, or Lectures based on the period and topics covered in above. Two hours per week.

6. **Old Testament History.** Paton, History of Syria and Palestine, chapter 10. Kent, The Divided Kingdom. Kent, Babylonian, Persian and Greek Periods, pages 1-267. Summer reading, I and II Samuel, I and II Kings, I and II Chronicles, Ezra and Nehemiah. Two hours week.

7. **Introduction.** (*a*) Textual Criticism: A. S. Geden, Introduction to the Hebrew Bible, Chapters 1-5. (*b*) Pentateuchal Criticism: Introduction to the Hebrew Bible, A. S. Geden, Chapter VI or G. B. Gray, A Critical Introduction to the Old Testament, Chapters I-VI, and Introduction to the Former Prophets, G. B. Gray, Chapters VII-IX. Two per hours per week.

8. **The Latter Prophets and the Writings.** G. B. Gray, Chapters 10-24. Summer reading, Cornill, The Prophets of Israel. Two hours per week.

9. **Historical Geography.** Geo. Adam Smith. For 1922-1923 and alternate years. One hour per week.

10. **Archaeology.** Barton, Archaeology and the Bible, pages 1-218. Session 1922-1923 and alternate years. One hour per week

11. **Old Testament Religion.** Marti, Religion of the Old Testament or Montefiore, Hibbert Lectures, Chapters 1-5. One hour per week. For 1921-1922 and alternate years.

12. **Social Ethics.** Kent, The Social Teachings of the Prophets and Jesus, pages 1-173. For Session 1921-1922. One hour per week.

Exegetical Work

†13. **Historical Hebrew.** Genesis, Chapters 12, 13, 14, 22, 23, 49. Exodus, Chapters 3, 6, 13, 15. Two hours per week.

†14. **Legal Codes.** Leviticus, Chapters 16, 19. Numbers, Chapters, 11, 16, 21. Deuteronomy, Chapters 11, 12, 18. Two hours per week.

†15. **Prophetical Literature.** Isaiah, Chapters 5, 6, 7, 8, 9, 28, 37, 38. Two hours per week.

†16. **Prophetical Literature.** Isaiah, Chapters 40, 41, 42, 45, 47, 52, 53, 58, 64. Two hours per week.

†17. **Hebrew Poetry.** Judges, Chapter 5; I Samuel, Chapter 2:1-10; II Samuel, Chapter 1:19-27; Habakkuk, Chapter 3; Psalms 2, 6, 8, 14, 16, 19, 23. One hour per week.

†18. **Wisdom Literature.** Job, Chapters 2, 3:14-26, 4, 14, 25, 31:1-11 and verses 35-40, 32, 38:1-27, 42. One hour per week.

First Year, Arts: Courses 1, 2.
Second Year, Arts: Courses 3, 4.
Third Year, Arts: Major: Courses 5, 6, 11, 12, 13, 14, 15, 16, 17, 18.
General: Courses 5, 6, and 13, 14, or 1, 2.
Fourth Year, Arts: Major: Courses 7a, 7b, 8, 11, 12, 13, 14, 15, 16, 17, 18.
General: Courses 7a, 7b, 8, and 15, 16 or 3, 4.

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†In the treatment of Courses 13-18, special attention will be paid to questions of grammar, syntax, introduction, exegesis and history. Students are advised to consult the appropriate volumes of the Century Bible and the Cambridge Bible.

SCRIPTURE

Instruction in Scripture is provided only in the affiliated Colleges.

1. **Old Testament Scripture.** Isaiah 40-66, (Skinner, Cambridge Bible). In addition to mastering the contents of the book, students will be required to give attention to the contributions to its interpretation of critical, archaeological and historical research.

2. **New Testament Scripture.** Luke (Century Bible). Ramsay, Luke, The Physician.

Third Year, Arts: General: Courses 1, 2.

Fourth Year, Arts: General: Courses 1, 2.

DEPARTMENT OF ENGLISH

A. W. Crawford, M.A., Ph.D.	*Professor*
Aaron J. Perry, M.A.	*Assistant Professor*
W. T. Allison, M.A., Ph.D.	*Assistant Professor*
Flora Ross Amos, B.A., Ph.D.	*Assistant Professor*
John A. M. Edwards, M.A.	*Instructor*

N.B.—For key to system of numbering courses, see page 4.

†1, 2. **English Composition.** Text: The Essentials of English Composition, and Illustrative Examples of English Composition, by James W. Linn (Scribner's). The course is designed especially for students in Senior Matriculation to the Engineering and Medical Courses. Short themes will be required of all students throughout the year, and longer themes at the discretion of the instructor. (1) First Term: Part I, with Examples. (2) Second Term: Part II, with Examples. Two hours a week.

3, 4. **English Literature.** A study of leading English poets and prose writers, from Chaucer to the present time. Text: English Poems from Chaucer to Kipling, edited by Parrott and Long (Ginn & Co.). (1) First Term: (*a*) pages 1-143 (Chaucer to Burns); (*b*) Shakespeare's Twelfth Night; (*c*) Bunyan's Pilgrim's Progress, Part I. (Macmillan's Pocket Classics); (*d*) Goldsmith's The Vicar of Wakefield (Macmillan's Pocket Classics). (2) Second Term: (*a*) pages 144-302 (Wordsworth to Kipling); (*b*) Lamb's Essays of Elia (Everyman's Library); (*c*) Scott's Ivanhoe (Everyman); (*d*) Stevenson's Travels With a Donkey, etc. (Macmillan's Pocket Classics). Two hours a week.

5, 6. **English Composition** Text: (*a*) Theory and Practice of Technical Writing, by Samuel Earle (Macmillan). This course is designed for students of the first year Engineering Course. Short themes will be required of all students throughout the year, and longer themes at the discretion of the instructor. First Term, Part I; Second Term, Part II. (*b*) Readings and discussions based on Addresses to Engineering Students, by Waddell and Harrington. Pub. Waddell & Harrington, Kansas City, Missouri. One hour a week.

7, 8. **English Literature.** (1) First Term: (*a*) Shakespeare's As You Like It (Macmillan's Pocket Classics). (*b*) Scott's Kenilworth (Everyman's Library) (*c*) Tennyson's The Coming of Arthur, Gareth and Lynette (Macmillan's Pocket Classics). (2) Second Term: (*a*) Shakespeare's Julius Caesar (Macmillan's Pocket Classics). (*b*) Stevenson's

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† See note under Courses 9, 10.

The Master of Ballantrae (Macmillan's Pocket Classics). (*c*) Tennyson's Lancelot and Elaine, Guinevere (Macmillan's Pocket Classics). One hour a week.

9, 10. **English Composition.** Text: The Essentials of English Composition, and Illustrative Examples of English Composition, by James W. Linn (Scribner's). A study of the principles and practice of English composition. The writing of numerous original compositions during the year. Study of selections from modern prose writers, under the direction of the instructor. (1) First Term: Part I, with Examples. (2) Second Term: Part II, with Examples. Two hours a week.

(*Note*—In Courses 1, 2, 9, 10, 13, 14, a maximum of twenty marks will be allowed for the class work of each term, including essays. This work will be examined by the instructor. A maximum of thirty marks will be allowed for the final examination paper for each term. The marks for term work will not be counted in determining the award of scholarships).

11, 12. **English Literature.** Texts: History of English Literature, by W. J. Long (Ginn & Co.); English Poetry: Its Principles and Progress, by Gayley and Young (Macmillan).

(1) First Term: (*a*) History—Chapters VII-IX. (*b*) Prose—Bunyan's Pilgrim's Progress, Part I; Addison and Steele's The De Coverley Papers, (King's Treasuries, Dent). (*c*) Poetry—Milton's L'Allegro, Il Penseroso, Lycidas; Dryden's Alexander's Feast; Pope's Rape of the Lock; Gray's Elegy in a Country Churchyard; Goldsmith's Deserted Village; Burns's Tam o' Shanter, The Cotter's Saturday Night.

(2) Second Term: (*a*) History—Chapters X-XI. (*b*) Prose—Lamb's Essays of Elia; Ruskin's Sesame and Lilies (King's Treasuries, Dent). (*c*) Poetry—Wordsworth's Tintern Abbey, Ode to Duty, London, 1802, Composed upon Westminster Bridge, It is a Beauteous Evening, The World is too Much With Us, Scorn not the Sonnet; Coleridge's Ancient Mariner; Byron's Prisoner of Chillon, Sonnet—On Chillon, Stanzas from Childe Harold; Shelley's Ode to the West Wind, To a Skylark; Keats's Ode to a Nightingale, On First Looking into Chapman's Homer, On the Grasshopper and the Cricket, La Belle Dame Sans Merci; Tennyson's Oenone, The Lady of Shalott, Ulysses, Tithonus; Browning's Home Thoughts from Abroad, Home Thoughts from the Sea, Evelyn Hope, My Last Duchess, Andrea del Sarto; Arnold's Rugby Chapel, Dover Beach. Two hours a week.

*13, 14. **English Prose.** Text: Modern English Prose, edited by Carpenter and Brewster (Macmillan). A study of numerous examples of modern English prose, with practice in writing. Minimum requirement of 2000 words in the written composition of each term.

(1) First Term: (*a*) Study and Practice, chiefly in Description and Narration, pages 1-214. (*b*) Stevenson's "Virginibus Puerisque" (Scribner's Modern Students' Library).

(2) Second Term: (*a*) Study and Practice chiefly in Exposition and Argument, pages 215-463. (*b*) Charles Reade's "Never Too Late to Mend." *Assistant Professor Allison.*

15, 16. **English Literature.**

(1) First Term: (*a*) Keats's The Eve of St. Agnes; Tennyson's Gareth and Lynette, Lancelot and Elaine, The Passing of Arthur; Lowell's The Vision of Sir Launfal (Gayley & Young); Scott's Marmion; Arnold's Sohrab and Rustum (Macmillan's Pocket Classics). (*b*) Scott's Quentin

Durward (Everyman's Library); Hardy's Far from the Madding Crowd (Cornell Series).

(2) Second Term: (*a*) Chaucer's Prologue to the Canterbury Tales (Gayley & Young). (*b*) Shakespeare's Romeo and Juliet, Coriolanus. Two hours a week. *Professor Crawford and Assistant Professor Perry.*

Note—These courses include a knowledge of the life and times of the authors read, from Long and other sources, and an ability to render Chaucer into modern English prose.

17. **Chaucer.** The Canterbury Tales: The Prologue, The Knight's Tale, The Tale of the Man of Lawe, The Nonne Preestes Tale, The Pardoner's Tale, The Second Nonnes Tale. Texts: Selections from Chaucer, edited by E. A. Greenlaw (Scott, Foresman & Co.); Chaucer, The Tale of the Man of Lawe, etc., edited by W. W. Skeat (Clarendon Press); Chaucer, by A. W. Ward (English Men of Letters). Two hours a week. *Assistant Professor Perry.*

18. **Middle English.** Langland's Piers the Plowman: Prologue and Passus I-VII, edited by W. W. Skeat (Clarendon Press); Translation of The Pearl, and Sir Gawain and The Green Knight, in Romance, Vision, and Satire, edited by Jessie L. Weston (Houghton, Mifflin & Co.); Translation of The Owl and the Nightingale, in The Chief Middle English Poets, edited by Jessie L. Weston (Houghton, Mifflin & Co.). Reference: Baldwin's Introduction to Mediaval Literature (Scribner's).

(*Note*—Miss Weston's books need not be bought by students. The translations may be read in the Library.) *Assistant Professor Perry.*

19. **Spenser and Milton.** (*a*) Spenser: Faerie Queen, Book 1. Text: Edited by Kitchin (Clarendon). Church: Spenser (English Men of Letters). (*b*) Milton: Comus; Areopagitica; Sonnets; Paradise Lost, Books 1, II, III, IV; Samson Agonistes; Pattison: Milton (English Men of Letters). Three hours a week. *Assistant Professor Allison.*

20. **Eighteenth Century Literature.** (*a*) Prose—Swift: Gulliver's Travels (Macmillan's Pocket Classics); Addison and Steele: The Sir Roger de Coverley Papers (Macmillan's Pocket Classics); Goldsmith: She Stoops to Conquer (Macmillan's Pocket Classics); Boswell's Life of Johnson, abridged and edited by C. G. Osgood (Scribner's Modern Students' Library). (*b*) Ballads—Old English Ballads, edited by Armes (Macmillan's Pocket Classics). (*c*) Poems—Pope: Windsor Forest; Essay on Criticism; Epistle to Dr. Arbuthnot; Essay on Man; Johnson: Vanity of Human Wishes; Collins: Ode to Simplicity; Ode to Evening; The Passions; Gray: Ode on the Spring; Ode on Eton College; Hymn to Adversity; Elegy in a Country Churchyard; The Progress of Poesy; The Bard; Cowper: Selections from The Task; On the Receipt of My Mother's Picture; Burns: Mary Morison; The Twa Dogs; The Cotter's Saturday Night; To a Mouse; To a Mountain Daisy; John Anderson; Highland Mary; Scots Wha Hae; Is There for Honest Poverty; Blake: Song; Introduction to "Songs of Innocence"; The Echoing Green; The Lamb; Holy Thursday; The Defiled Sanctuary; The Tiger; The Garden of Love; From "Milton"; To the Queen. Text: English Poems of the Eighteenth Century, edited by Bronson (University of Chicago Press). Two hours a week. *Assistant Professor Allison.*

21. **The English Drama.** Everyman; The Wakefield Second Shepherd's Play; Udall's Ralph Roister Doister; Norton and Sackville's Gorboduc; Marlowe's The Jew of Malta; Jonson's Volpone; Beaumont and Fletcher's The Knight of the Burning Pestle (Everyman's Library, numbers 381, 492, 383, 489, 506). Introduction to Shakespeare, by MacCracken, and others (Macmillan): Chapters II, "English Drama Before

Shakespeare"; III, "The Elizabethan Theatre"; IV, "Elizabethan London." Two hours a week. *Professor Crawford.*

22. **Shakespeare.** King John; Macbeth; Hamlet; Antony and Cleopatra; The Winter's Tale; The Tempest (Tudor Shakespeare, Macmillan). Introduction to Shakespeare, by MacCracken, and others (Macmillan). Reference: Hamlet, An Ideal Prince, and other Essays by A. W. Crawford (Copp Clark). Three hours a week. *Professor Crawford.*

23. **The Romantic Poets.** English poems of the Nineteenth Century, edited by Bronson (University of Chicago Press); Selections from Wordsworth, Coleridge, Shelley and Keats. Lives of the Authors in English Men of Letters Series. Three hours a week. *Professor Crawford.*

24. **The English Novel.** The Early Novel: Extracts in Simond's Introduction to English Fiction (Heath); Goldsmith's Vicar of Wakefield (Everyman's Library); Walpole's Castle of Otranto, (King's Classics); Edgeworth's Castle Rackrent (Everyman); Thackeray's Henry Esmond (Everyman); Dickens's Dombey and Son (Everyman); George Eliot's Silas Marner (Everyman); Stevenson's Master of Ballantrae (People's Library); Hardy's The Return of the Native (Scribner's); William de Morgan's Joseph Vance (Heineman); Text: Development of the English Novel, by W. L. Cross (Macmillan). Two hours a week. *Assistant Professor Allison.*

(*Note*—As preparation for class study, students should read these novels carefully during the preceding summer.)

25. **Tennyson.** (*a*) Shorter Poems: The Two Voices; The Palace of Art; The Lotus-Eaters; St. Simeon Stylites; Locksley Hall; The Vision of Sin; Break, Break, Break; Ode on the Death of the Duke of Wellington; In the Valley of Cauteretz; Locksley Hall (Sixty Years After); Crossing the Bar. (*b*) In Memoriam. (*c*) Maud. (*d*) Idylls of the King: The Coming of Arthur; The Holy Grail; Guinevere; The Passing of Arthur. Texts: Works of Tennyson, edited by Hallam, Lord Tennyson (Macmillan); Tennyson, by A. C. Benson (Methuen's Shilling Library). Two hours a week. *Assistant Professor Allison.*

26. **Browning.** My Last Duchess; Count Gismond; The Flight of the Duchess; The Lost Leader; In a Gondola; The Last Ride Together; By the Fireside; The Laboratory; Gold Hair; The Statue and the Bust; Up at a Villa—Down in the City; Pictor Ignotus; Fra Lippo Lippi; The Bishop Orders his Tomb; How it Strikes a Contemporary; Abt Vogler; Evelyn Hope; Memorabilia; Prospice; Childe Roland to the Dark Tower Came; A Grammarian's Funeral; An Epistle of Karshish; Caliban upon Setebos; Saul; Rabbi Ben Ezra; Confessions; In a Balcony; Old Pictures in Florence; The Boy and the Angel; A Tale; Why I am a Liberal; Epilogue to "Asolando." Text: Browning's Selected Poems, edited by Porter and Clarke (Crowell, N.Y.); Life of Browning, by Edward Dowden (Everyman). Three hours a week. *Professor Crawford.*

27, 28. **Old English.** Text: Bright's Anglo-Saxon Reader (Holt). (1) First Term: Phonology, Grammar. Extracts I-V, XII, XVI, XVIII, XIX. (2) Second Term: Grammar, Versification. Extracts XX, XXI, XXII, XXIII, XXIV. Judith, edited by Albert S. Cook (D. C. Heath & Co.). Two hours a week. *Assistant Professor Perry.*

29, 30. **History of the English Language.** Texts: Jespersen's Growth and Structure of the English Language (Stechert); Krapp's Modern English, Its Growth and Present Use (Scribner's); Smith's Studies in English Syntax (Ginn & Co.).

References: Noble's Story of English Speech (Badger); Emerson's History of the English Language (Macmillan); Greenough and Kittredge's

Words and Their Ways in English Speech (Macmillan). One hour a week. *Assistant Professor Perry.*

31. **Nineteenth Century Literature.** (*a*) Prose. Carlyle's Heroes and Hero-Worship (Everyman's Library); Ruskin's Crown of Wild Olive (Everyman). (*b*) Poetry. English Poems of the Nineteenth Century, edited by Bronson (University of Chicago Press): Selections from Mrs. Browning; Clough; Arnold; Rossetti; Swinburne. One hour a week. *Assistant Professor Allison.*

32. **Contemporary and Canadian Poets.** (*a*) British contemporary poets. Text: Poems of To-Day, published for the English Association (London), by McClelland & Stewart (Toronto). Selections from Robert Bridges. Rupert Brooke, W. H. Davies, Walter De La Mare, Rudyard Kipling, John Masefield, Alice Meynell, Henry Newbolt, Francis Thompson, William Watson, W. B. Yeats.

(*b*) Canadian Poets. Text: The Oxford Book of Canadian Verse. Special attention will be paid to the selections from the following: Charles Sangster, Charles Mair, Isabella Crawford, W. H. Drummond, Charles G. D. Roberts, Wilfred Campbell, Bliss Carman, Archibald Lampman, Duncan C. Scott, Pauline Johnson. Additional readings in the authors named may be assigned by the instructor. Reference: A History of English Canadian Literature to Confederation, by Ray Palmer Baker (Harvard University Press). One hour a week. *Assistant Professor Allison.*

Senior Matriculation: Courses 1, 2, 3, 4, or 9, 10, 11, 12.
First Year, Arts: Courses 9, 10, 11, 12.
First Year, Pharmacy: Courses 1, 2, 3, 4.
First Year, Science: Courses 1, 2, 3, 4.
First Year, Architecture: Courses 1, 2.
First Year, Engineering: Courses 5, 6, 7, 8.
Second Year, Arts: Courses 13, 14, 15, 16.
Second Year, Architecture: Courses 7, 8.
Third Year, Arts (Major): Courses 17, 18, 19, 20, 21, 22.
(Minor): Courses 19, 21, 22.
(General): Courses 19, 22.
Fourth Year, Arts (Major): Courses 23, 24, 25, 26, 27, 28, or 23, 24, 25, 26, 29, 30, 31, 32.
(Minor): Courses 25, 24, 29, 30.
(General): Courses 25, 26.

DEPARTMENT OF FRENCH

W. F. Osborne, M.A.	*Professor*
F. C. Green, M.A., Ph.D.	*Assistant Professor*
Celine A. Ballu, B.A.	*Lecturer*
A. Marie Haynaud, B.A.	*Lecturer*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Grammar, Composition and Oral Work.** This latter will include an elementary study of phonetics, conversation and dictation. First Term: Elementary French Grammar, by E. W. Olmsted (Holt & Co.), to end of Lesson XIX. Second Term: Same text as in First Term, from Lesson XX to end. To provide material for conversation, and for the sake of its content, students will furnish themselves with Lavisse: Histoire de France (Heath). Two hours a week.

3, 4. **French Authors.** First Term: French Short Stories (ed. by Buffum, pub. by Henry Holt), pp. 3-156. Second Term: Same text, pp. 157-299, and Legouvé et Labiche: La Cigale chez les Fourmis (Ginn & Co.). Students are advised to use Cassell's English-French and French-English Dictionary. Two hours a week.

5, 6. **Senior Matriculation and B.Sc. French.** First Term: French Short Stories (ed. by Buffum, pub. by Henry Holt), pp. 3-156. Second Term: Same text, pp. 157-299, and Legouvé et Labiche: La Cigale chez les Fourmis (Ginn & Co.). Two hours a week.

In both terms one hour a week will be given in the case of these classes to practical exercises in grammar, dictation, reading aloud and conversation. Special emphasis will be laid on the study of verbs.

7, 8. **French Authors.** First Term: Corneille, Horace (ed. by Matzke and pub. by Heath). Second Term: Victor Hugo, Quatre-vingt-treize (ed. by Fontaine and pub. by Heath). The student will use Cassell's English-French and French-English Dictionary. One hour a week.

9, 10. **General Survey of French Literature.** First Term: Histoire de la Littérature française, by Rene Doumic (Librairie Paul Delaplane, Paris). The 17th Century Period. Second Term: Same text, the 18th and 19th Centuries. One hour a week.

11, 12. **Conversation and Original Composition in French.** One hour a week each term. Allen and Schoell's "French Life" (Henry Holt).

13, 14. **Translation from English into French.** One hour a week each term. First term—Grandgent's French Composition (Heath), Part III. Second Term: Grandgent as above, Part IV.

15. **History of French Literature, Seventeenth Century.** Ch.-M. Des Granges, Histoire de la Littérature française (Librairie Hatier, Paris, 18th edition), pages 299-428. One hour a week.

In order to give the student direct contact with seventeenth century documents not covered in courses 17 and 18, there is prescribed as an integral part of Courses 15 and 16 all of "Seventeenth Century French Reading" (ed. by Schinz and King, pub. by Holt) except authors contained in Courses 17 and 18.

16. Course 15 continued. Des Granges, pages 429-586, Schinz and King, as above. One hour a week.

17. **French Masterpieces of the Seventeenth Century.** Corneille, Polyeucte (ed. by Henning and pub. by Ginn & Co.); Pascal, Les Pensées (in selections from Pascal, ed. by Warren, pub. by Heath); Bossuet, Oraisons Funèbres de Henriette de France, Henriette d'Angleterre, et de Condé (edited by Rebelliant). La Bruyère, Des Femmes, du Coeur, de la Société et de la Conversation, des Biens de Fortune, de la Cour, des Grands (edition of Les Caractères, ed. by Warren, pub. by Heath). Three hours a week.

18. **French Masterpieces of the Seventeenth Century.** Madame de la Fayette, La Princesse de Clèves (Ginn & Co.); Racine, Iphigénie (ed. by Woodward, pub. by American Book Co.); Molière, Les Précieuses Ridicules (Heath), Le Médecin Malgré Lui (Heath), Le Misanthrope (Heath); La Fontaine, Fables, pages 128-162, in Seventeenth Century French Reading, Schinz and King (Holt); Boileau, L'Art Poétique (in selections from Boileau, pub. by Heath).

19, 20. **Progressive Exercises in Original Composition in French.** One hour a week.

21. **Translation from English into French.** Cameron's Elements of French Composition, Part II (Henry Holt). One hour a week.

22. **Translation from English into French.** Cameron's Elements of French Composition, Part III (Henry Holt). One hour a week.

23, 24. **French Conversation.** This section of the work will represent fifty marks for the year. One hour a week.

25. **History of French Literature, Eighteenth Century.** Ch.-M. Des Granges, Histoire de la Littérature française (Librairie Hatier, Paris 18th edition), pages 587-729. One hour a week.

26. **History of French Literature, Nineteenth Century.** Ch.-M. Des Granges, as in Course 25, pages 730 to 939. One hour a week.

27. **French Masterpieces of the Eighteenth Century.** Montesquieu, Letters 1-75 inclusive in the edition of Lettres Persones, edited by Cru (Oxford University Press, Toronto); Voltaire, Zadig, ed. by Babbitt (Heath); Diderot, selections ed. by Giese (Heath); Rousseau, selections from edition by Rocheblave, Pages choisies des grands Ecrivains (Librairie Armand Colin, Paris); Sedaine, Le Philosophe sans le Savoir, ed. by Oliver (Oxford University Press, Toronto); Le Sage, Turcaret, ed. by Kerr (Heath); Marivaux, Le Jeu de l'Amour et du Hasard, ed. by Fortier (Heath); Beaumarchais, Le Barbier de Séville, ed. by Spiers (Heath). Three hours a week.

28. **French Masterpieces of the Nineteenth Century.** Chateaubriand, Atala, edited by Kuhns (Heath); Lamartine, Selections from Premières Meditations Poétiques, edited by Curme (Heath); Victor Hugo, Ruy Blas, ed. by McKenzie (Holt), and pages 3-107, in selected Poems by Victor Hugo, edited by Schinz (Heath); Alfred de Musset, Selection from the Poetry of Alfred de Musset, edited by Kuhns (Ginn); Balzac, Adieu, in Cinq Scènes de la Comédie Humaine, edited by Wells (Heath). René Bazin; Le Blé qui lève, edited by Neff (Holt). Of the marks assigned for examination on this section about 30 per cent. will be given to translation, the balance of the marks will represent critical work. Three hours a week.

29, 30. **Progressive Exercises in Original Composition in French.** One hour a week.

31, 32. **Translation from English into French.** French Composition, by G. W. F. Goodridge (Oxford University Press, Toronto). One hour a week.

33, 34. **French Conversation.** This section of the work will represent not less than fifty marks for the year. One hour a week.

Senior Matriculation:		Courses 5, 6.
First Year, Science:		Courses 5, 6.
First Year, Architecture:		Courses 5, 6.
First Year, Arts:		Courses 1, 2, 3, 4.
First Year, Pharmacy	(Degree Course)	Courses 5, 6.
Second Year, Arts:		Courses 7, 8, 9, 10, 11, 12, 13, 14.
Third Year, Arts	(Major):	15, 16, 17, 18, 19, 20, 21, 22, 23, 24.
	(Minor):	Courses 17, 18, 23, 24.
	(General):	Courses 17, 18.
Fourth Year, Arts	(Major):	Courses 25, 26, 27, 28, 29, 30, 31, 32, 33, 34.
	(Minor):	Courses 27, 28, 33, 34.
	(General):	Courses 27, 28.

DEPARTMENT OF GERMAN

J. H. Heinzelmann, B.A., Ph.D. .... *Professor*
Helen F. Bryce, B.A. .... *Assistant*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Elementary German.** The course is offered for those who enter the University without German. For the first term the work will cover Keyser and Monteser's Foundations of German (Amer. Book Co.), pages 1-65, and Martini's First German Reader (Ginn), pages 1-41. For the second term the work in the Grammar will entend to p. 164 and in the Reader to p. 80. Four hours a week.

3, 4. **First Year Authors.** The reading for the first term will consist of Storm's Immensee (Holt), Minckwitz and Unwerth's Edelsteine (Ginn) and Hatfield's Shorter German Poems (Heath), Part I. Poems 2, 8, 10, 11, 18 and 20 to be memorized.

During the second term the reading will be Heyse's L'Arrabbiata (Heath), Gerstacker's Germelshausen (Ginn), Solomon's Geschichte einer Geige (Heath), and Shorter German Poems, Part II. Poems 27, 29, 31 and 35 are to be memorized.

5, 6. **First Year Oral and Written Composition.** Easy German Conversation by Allen and Phillipson (Holt). For the first term, pages 1-37 and 97-109. The student is further required to write a number of very brief essays based upon the reading in the authors.

During the second term the work will cover pages 39-93 and 109-126, with additional essays in connection with the reading.

7, 8. **Second Year Authors.** For the first term the reading will consist of Bender, German Short Stories, pages 1-129, and Selections from Dillard's Aus dem deutschen Dichterwald (Amer. Book Co.).

For the second term the reading will cover pages 130-215 in German Short Stories and Ernst's Flachsmann als Erzieher (Ginn), with Selections from Aus dem deutschen Dichterwald.

9, 10. **German Composition.** For the first term, Carrington and Holzwarth's German Composition, Part 1. The student is further required to write a number of short essays on the material covered in the authors.

For the second term, Part II of German Composition with additional essays based on the authors.

11. **The German Short Story.** Its history and technique in the nineteenth century. Eichendorff, Aus dem Leben eines Taugenichts (Heath); Storm, In St. Jürgen (Ginn); Heyse, Vetter Gabriel (Holt); Keller, Romeo und Julia auf dem Dorfe (Holt); Rosegger, Das Holzknechthaus (Oxford Press); Meyer, Gustav Adolfs Page (Heath); Schnitzler, Lieutnant Gustl (German edition). Two hours per week. (Not to be given in 1921-1922.)

12. **History of German Literature to 1800.** Lectures on the main currents of German literature in its earlier periods, illustrated by the reading of selections of some of the more important masterpieces.

13. **Schiller.** The author's life and the critical reading of Kabale und Liebe (Holt), Wallensteins Tod (Heath), Wilhelm Tell (Holt), and Poems (Holt). Two hours per week.

14. **The German Novel.** Lectures on its history will accompany the reading of typical examples. Two hours per week. (Not given in 1921-22.)

15, 16. **Composition.** One hour per week.

17. **Lessing.** A study of the life and time of Lessing will accompany the reading of Minna von Barnhelm (Holt), Emilia Galotti (Heath), and Nathan der Weise (Ginn). Three hours per week.

18. **The Modern German Drama.** A study of the development of the German drama in the nineteenth century, with some consideration of related movements in other European countries. About twenty representative dramas will be read and discussed. Four hours per week. (Not given in 1921-1922.)

19. **The Romantic School.** Lectures on the history of German literature from 1800 to 1850, with collateral readings and reports. Four hours per week. (Not given in 1921-1922.)

20. **Goethe.** A detailed study of his life and literary development, together with the reading of the following: Poems (Holt), Götz von Berlichingen (Ginn), Werther (Oxford Press), Faust, Part I. (Heath), Iphigenie (Ginn). Four hours per week.

21. **Modern Germany.** Its geography and the more important questions relating to its historical, educational, social and artistic development during the nineteenth century. Two hours per week. (Not given in 1921-22.)

Senior Matriculation: Courses 1, 2, or 3, 4, 5, 6.
First Year, Science: Courses 1, 2, or 3, 4, 5, 6.
First Year, Arts: Courses 1, 2, or 3, 4, 5, 6.
First Year, Pharmacy (Degree Course) Courses 1, 2, or 3, 4, 5, 6.

Second Year, Arts: Courses 7, 8, 9, 10.
Third Year, Arts: (Major): Courses 12, 13, 15, 16, 17, 20.
(Minor): Courses 15, 17, 20.
Fourth Year, Arts: (Major): Courses 12, 13, 15, 16, 17, 20.
(Minor): Courses 15, 17, 20.
(General): Courses 12, 17.

ICELANDIC

Instruction in Icelandic is provided only in Wesley College.

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Grammar.** Finnur Jónsson, Málfraeði. First term, pp. 54-85. Second term, pp. 85-142. One hour a week.

3, 4. **Authors.** Laxdaela Saga. First term, cc. 1-39 (pp. 1-116). Second term, cc. 40-88, (pp. 117-266). Three hours a week.

5, 7. **Authors.** With grammar in conjunction. (a) Gunnlaugs Saga Ormstungu. (b) Sæmundar Edda (F. Jónsson), pp. 87-107. Four hours a week.

6, 8. **Authors.** With grammar in conjunction. (a) Sæmundar Edda (F. Jónsson), pp. 1-58, 137-160, 169-173. (b) History of Icelandic Literature (F. Jónsson), pp. 63-91. Four hours a week.

First Year, Arts: Courses 1, 2, 3, 4.
Second Year, Arts: Courses 5, 6, 7, 8.

PHILOSOPHY (ENGLISH)

Henry W. Wright, B.A., Ph.D. .... *Professor*
Rupert C. Lodge, M.A. (Oxon) .... *Professor*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Psychology.** Pillsbury's Essentials of Psychology. James's Briefer Course, Chapters X-XVIII. Two hours a week. *Professor Lodge.*

1a, 2a. **Logic.** Lodge's Introduction to Modern Logic. First Term: Parts I and II (Judgment and Inference). Second Term: Part III. (Scientific Method). Two hours a week. *Professor Lodge.*

1b, 2b. **Ethics.** Wright's Self-Realization. Two hours a week. *Professor Wright.*

3, 4. **Social Philosophy.** First Term: Hobhouse's Morals in Evolution. Second Term: MacDougall's Social Psychology and Group Mind. Four hours a week. *Professor Wright.*

5, 6. **History of Philosophy** (Ancient and Medieval). Bakewell, Sourcebook in Ancient Philosophy; Plato, Republic (omitting Books VIII-IX); St. Augustine and St. Thomas Aquinas, Selections; Roger's Student's History of Philosophy to end of Medieval Period. First Term: To end of Plato. Second Term: Aristotle to end of Medieval Period. Four hours a week. *Professor Lodge.*

7, 8. **History of Philosophy** (Modern). Rand, Modern Classical Philosophers, Russell, Bradley, James, Varisco, etc., selections; Roger's Student's History of Philosophy. First Term: Bruno to Kant, inclusive. Second Term: Fichte to present day, inclusive. Four hours a week. *Professor Lodge.*

9, 10. **Philosophy of Religion.** First Term: Coe's Psychology of Religion. Second Term: Wright's Faith Justified by Progress. Two hours a week. *Professor Wright.*

11, 12. **Problems of Philosophy.** Perry's Present Tendencies in Philosophy, with assigned readings. Two hours a week. *Professor Wright.*

13, 14. **Philosophy of Plato.** Dialogues, translated and edited by Jowett (all except Laws), Zeller, Plato. Four hours a week.

15, 16. **Philosophy of Locke.** Locke's Essay on the Human Understanding (Fraser's Edition); Locke's Conduct of the Understanding; J. Gibson, Locke's Theory of Knowledge. Four hours a week.

17, 18. **Philosophy of Kant.** Watson, Selections from Kant, with assigned readings; Watson, Kant's Philosophy Explained. Four hours a week.

19, 20. **Philosophy of Berkeley and Hume.** Berkeley, Principles of Human Knowledge, and Three Dialogues between Hylas and Philonous (edited by Fraser), A. C. Fraser, Berkeley; Hume, Enquiry concerning the Human Understanding. Four hours a week.

21, 22. **History of Ethics.** Sidgwick's Outline of History of Ethics. Rand's Classical Moralists. Four hours a week.

23, 24. **Systematic Ethics.** Rashdall's Theory of Good and Evil. Dewey and Tufts Ethics. Four hours a week.

25, 26. **Metaphysics.** Taylor's Elements of Metaphysics. Bradley's Appearance and Reality. Two hours a week.

27, 28. **Philosophy of Religion.** Galloway's Philosophy of Religion. Two hours a week.

GRADUATE COURSES

29, 30. Seminar in Logic and the History of Philosophy. Two hours a week. *Professor Lodge.*

31, 32. Seminar in Ethics and Metaphysics. Two hours a week. *Professor Wright.*

Second Year, Arts	(1921-1922):	Courses 1, 2; 1b, 2b.
	(1922-1923):	Courses 1, 2; 1a, 2a.
Third Year, Arts:	General:	Course 3, or 5.
	Minor:	Course 5, 6.
	Major:	Courses 3, 4 and 5, 6.
	Full Course:	Courses 3, 4, 5, 6, and 15, 16, 21, 22.
Fourth Year, Arts:	General:	Course 7 or 9, 10.
	Minor:	Course 9, 10 and 11, 12.
	Major:	Courses 7, 8, 9, 10, 11, 12.
	Full Course:	17, 18 or 19, 20, and 23, 24 or 25, 26, 27, 28.

PHILOSOPHY (LATIN)

(*Instruction in Latin Philosophy is provided only in St. Boniface College*)

N.B.—For key to system of numbering courses, see page 4.

1. **Logica.** Russo.

3, 4. **Metaphysica.** Russo. (*a*) Ontologia; Cosmologia; (*b*) Anthropologia, Theologia Naturalis.

5, 6. **Monsabré.** Conférences (1875).

7. **Evolution.** Gerard. The Old Riddle and Newest Answer.

8. **Psychology.** Maher.

9 10. **Histoire de la Philosophie.** Vallet, Histoire de la Philosophie pages 1-310. Premier terme—Philosophie orientale grecque, romaine, alexandrine, philosophie des Pères; second terme—Philosophie scolastique, philosophie de la Renaissance. Deux heures par semaine.

9a, 10a. **History of Philosophy.** Turner, History of Philosophy, pages 1-323. First term—Oriental, pre-Socratic, Socratic and Aristotelian philosophy; second term—Post-Aristotelian, Graeco-Oriental, Patristic and Scholastic philosophy. Two hours a week.

11, 12. **Philosophia Moralis.** (*a*) Jouin, Generalia Morum Principia, Actus Humani, Lex Naturalis, Hominis Officia et Jura, Jus Proprietatis, Jus Sociale, Societas Domestica, Societas Civilis. Sept heures par semaine. (*b*) Lacordaire, Conférences de Notre-Dame, Economie Providentielle de la Réparation; Félix, Le Progrès par le Christianisme. Deux heures par semaine. (1922-23).

11a, 12a. **Philosophie Moralis.** (*a*)Lortie, Generalia Morum Principia, Actus Humani, Lex Naturalis, Hominis Officia et Jura, Jus Proprietatis Jus Sociale Societas Domestica Societas Civilis. Seven hours a week. (*b*) Rickaby Ethics and Natural Law The Family, The State; Leo XIII. Social Problems (Condition of the Working Classes, Christian Constitution of States, Duties of Christians as Citizens, Christian Marriage). Two hours a week. (1922-23.)

13 14. **Histoire de la Philosophie.** Vallet, Histoire de la Philosophie pages 415-546. Premier terme—Philosophie moderne du dix-septième siècle; second terme—Philosophie moderne du dix-huitième et du dix-neuvième siècle. Deux heures par semaine. (1922-23.)

13a, 14a. **History of Philosophy.** Turner , History of Philosophy, pages 324-660. First term—Third period of Scholastic Philosophy, Modern Philosophy to Kant; second tern—Modern Philosophy from Kant to our time, German, Scottish, English, French, Italian and American Philosophy. Two hours a week. (1922-23.)

15, 16. **Economie Politique.** Premier terme—Hervé-Bazin Economie Politique (Production, Echange, Répartition, Consommation); second terme, Cathrein, Socialisme (sa Nature, Vices Radicaux, Impossibilité Pratique, Objections). Trois heures par semaine. (1922-23.)

15a, 16a. **Political Economy.** First term—Burke, Political Economy (Production, Exchange, Money, Banking, Trade, Consumption); second term—Cathrein-Gettelmann, Socialism (its Nature, Development, Fundamental Tenets, Impracticability). Three hours a week. (1922-23.)

17 18. **Physique.** Notions de mécanique, hydrostatique, pesanteur, chaleur, acoustique, optique, électricité et magnétisme. Quatre heures par semaine.

17a, 18a **Physics.** Statics, hydrostatics, heat, sound, light, electricity and magnetism. Four hours a week.

19. 20. **General Physics** (Practical). The students perform a series of experiments to illustrate the theoretical principles studied in the lectures. Two hours a week.

22. **Astronomie Elementaire.** La terre et ses mouvements, le soleil, la lune, les planètes, les comètes, les étoiles, les nébuleuses, coordonnées célestes, hypothèses cosmogoniques. Deux heures par semaine.

22a. **Elementary Astronomy.** The earth and its motions, the sun, the moon, the planets, comets, stars and nebulae, celestial coordinates, cosmogonic hypotheses. Two hours a week.

23, 24. **Botany.** Division of Sciences. Comparison of living and non-living beings; differences between animals and plants, plants and minerals. Classification of plants, cells, tissues, seeds, roots, stems; primary and secondary Growth. Buds, Leaves Flowers Fruits. Types of Cryptogams. Two hours a week.
Text Book: Bergen, Elements of Botany.

25, 26. **Laboratory Course in General Botany.** Two hours a week.

27, 28. **Chimie.** Chimie élémentaire. Principes élémentaires de la chimie; éléments et composés; lois des combinaisons; atomes et molécules; acides, bases, sels; propriétés des éléments les plus connus et de leurs principaux composés; principes de l'analyse chimique des sels; introduction a la chime organique. Six heures par semaine avec travail de laboratoire. (1922-23.)

27a, 28a. **Chemistry.** Fundamental principles of chemistry; elements and compounds; laws of combination; atoms and molecules; acids, bases, salts; properties of some common elements and their more important compounds; principles of the analysis of simple salts; introduction to organic chemistry. Six hours per week with laboratory work. (1922-23.)

29, 30. **Practical Chemistry.** Experiments illustrating general principles and the preparation and properties of substances studied in lectures. One period of three hours per week. (1922-23.)

31. **Zoology.** General principles of Zoology. An introduction to Anatomy, Histology, Cytology and Physiology of Animals. The Frog: Skeletal System, Muscular System, Alimentary System, Respiratory System, Circulatory System, Urinogenital System, Nervous System and Sense-organs. Protozoa, Coelenterata, Coelomata invertebrata. Two hours a week. (1922-23).

32. **Practical Zoology.** A course of laboratory work to accompany the foregoing, providing an introduction to zoological methods. Two hours a week. (1922-23.)

Text Books: Marshall, "The Frog." O'Donoghue "An Introduction to Zoology.'

33. **Human Anatomy and Physiology.** Skeleton, Bones, Tissues, Respiration, Nutrition, Digestion, Circulation, Excretion, Nervous system and Sense-organs. Two hours a week. (1922-23.)
Text Book: Martin, "Human Body.'

Third and Fourth Year, Arts: Latin Philosophy (French-Speaking students): Courses 1; 3. 4; 5, 6; 9, 10; 17, 18; 19, 20; 22; 23, 24; 25. 26.

Third and Fourth Year, Arts: Latin Philosophy (English-speaking students): Courses 1; 3, 4; 7, 8; 9a, 10a; 17a. 18a; 19, 20; 22a; 23, 24; 25, 26.

Students in St. Boniface College proceeding to the Course in Latin Philosophy above will take the following course in the First and Second Years:

COURS DE PHILOSOPHIE LATINE

(Pour les élèves de langue française)

Tous les sujets sont fixes; il n'y a pas de sujets facultatifs.

PREMIERE ANNÉE

Français

Préceptes Littéraires. Verest, Manuel de Littérature. Premier terme—Notions de psychologie littéraire, pages 19-53; Description, Narration, Critique littéraire, pages 238-303; Les genres littéraires, pages 303-340. Second terme—Notions d'Esthétique et la Poésie, pages 340-440; genres intermédiaires, pages 497-514.

Histoire de la Littérature et Modèles français. Premier terme—Mouchard, Histoire de la Littérature, Première et Deuxième Partie, pages 1-193; Procès, Morceaux choisis; Molière, Les Femmes savantes. Second terme—Mouchard, Deuxième et Troisième Partie, pages 193-378, moins les chapitres V et VIII de la 3e Partie.

Auteurs. Procès, Morceaux choisis, Extraits des principaux écrivains du XVIIe, XVIIIe et XIXe siècle; Corneille, Polyeucte; Racine, Athalie.

Latin

Grammaire et Thèmes latins. Revue générale de la grammaire et de la prosodie latine. Ragon, Exercises latins sur la syntaxe, Versions latines.

Auteurs. Premier terme—Horace, Odes, Epodes choisies; Cicéron, Pro Ligario; Virgile, Enéide, chant IIe. Second terme—Virgile, Enéide, Chant IIe, seconde moitié; Cicéron, Pro Archia.

Grec

Grammaire et Thèmes grecs. Revue de la morphologie et de la syntaxe. Ragon, Thèmes grecs, Versions grecques.

Auteurs. Premier terme—Démosthène, 1ère Olynthienne; Homère, Iliade, Chant I, 1ère partie; Platon, Criton. Second terme—Homère, Iliade Chant I, 2e partie; Platon, Criton, la fin.

Anglais

Grammaire. Dulac et Bonnet, Grammaire anglaise—Étude des particules, prépositions, conjonctions, interjections. Premier Terme—pp. 285-356. Second Terme—p. 356 à la fin.

Auteurs. Premier Terme—Macaulay, Warren Hastings. Second Terme—Newman, Saul, Early Days of David, The Tartar and the Turk, The Turk and the Saracen, The Past and the Present of the Ottoman.

Mathématiques

Algèbre. Hall and Knight, Elementary Algebra, chapitres 32 à 39.

Trigonométrie. Playne and Fawdry.

Histoire

Saltet, Histoire Universelle.

SECONDE ANNÉE

Français

Préceptes Littéraires et Exercises. Verest, Manuel de Littérature. Premier terme: L'Art dramatique, Eloquence, première partie; le Débit. Second Terme: Éloquence, deuxième partie; les Genres intermédiaires.

Histoire de la Littérature et Auteurs. Premier Terme: Mouchard, Histoire de la Littérature française, IIIe partie, ch. V, VIII, XI et XII; IVe partie. Procès, Modèles Français, Tomes III et IV, extraits de Lesage, Bernardin de Saint-Pierre et André Chénier; Racine, Britannicus. Second terme: Mouchard, Histoire de la Littérature française, Ve partie; Procès, Modèles Français, Tomes III et IV: extraits des modernes: V. Hugo, de Musset, de Vigny, Leconte de Lisle, Veuillot, etc; orateurs: Bossuet, Bourdaloue, Berryer, Montalembert, de Mun.

Latin.

Thèmes latins et Versions. Mouchard, Thèmes latins. Ragon, Cent-vingt versions latines.

Auteurs. Premier terme: Cicéron, Pro Murena, Ière partie. Horace, Epitres. Second terme: Cicéron, Pro Murena, IIe partie; Horace, Satires.

Grec.

Thèmes grecs et Versions. Ragon, Thèmes grecs. Ragon, Deux-cents versions grecques.

Auteurs. Premier terme: Démosthène, Ière Philippique. Euripide, Médée, Ière partie. Second terme: Démosthène, IIe Philippique. Euripide, Médée, IIe partie.

Anglais.

Grammaire et Exercices de Thème et Version: Havet, L'Anglais enseigné aux Français. Premier terme: III, Ière partie. Second terme: III, IIe partie.

Auteurs. Premier terme: Macaulay, History of England (morceaux choisis). Second terme: Newman, What is a University?, University Life, Athens, The Schoolmen, The Strength and Weakness of a University, The Second Spring.

Histoire

Desrosiers et Bertrand, Histoire du Canada.

Mathématiques

Géométrie Analytique. La ligne droite, le cercle, la parabole, l'ellipse, l'hyperbole. Crawley and Evans' Analytical Geometry (University of Pennsylvania, Philadelphia), jusqu'à la page 106.

LATIN PHILOSOPHY COURSE

(*For English-speaking Students*)

All the subjects are required.

FIRST YEAR

English

Composition and Rhetoric. Composition—the writing of at least four original compositions during each term with an aggregate of at least 2,000 words for each term. Coppens, Introduction to English Rhetoric,—Literary aesthetics, theory of the beautiful, taste, imagination, theory of literature, poetics, nature and kinds of poetry, lyric and epic poetry, fiction, realism and romanticism in fiction, development of the English novel. First term—pages 1-150. Second term—pages 151-314. Text: Macaulay, Essay on Lord Clive.

English Literature. Texts: History of English Literature, by W. J. Long (Ginn); Principles and Progress of Poetry, by Gayley and Young (Macmillan).

(1) First term: (a) History—Chapters VII-IX. (b) Prose—Bunyan's Pilgrim's Progress, Part I; Addison and Steele's The De Coverley Papers. (King's Treasuries, Dent.). (c) Poetry—Milton's L'Allegro, Il Penseroso, Lycidas; Dryden's Alexander's Feast; Pope's Rape of the Lock; Gray's Elegy in a Country Churchyard; Goldsmith's Deserted Village; Burns's Tam o' Shanter; The Cotter's Saturday Night.

(2) Second term: (a) History—Chapters X-XI. (b) Prose—Lamb's Essays of Elia; Ruskin's Sesame and Lilies (King's Treasuries, Dent). (c) Poetry—Wordsworth's Tintern Abbey, Ode to Duty, London, 1802, Composed upon Westminister Bridge, "It is a beauteous evening," "The World is too Much With Us," "Scorn not the Sonnet;" Coleridge's Ancient Mariner; Byron's Prisoner of Chillon, Sonnet—On Chillon, Stanzas from Childe Harold; Shelley's Ode to the West Wind, To a Skylark: Keats's Ode to a Nightingale, On First Looking into Chapman's Homer, On the Grasshopper and the Cricket; La Belle Dame Sans Merci; Tennyson's Oenone, The Lady of Shalott, Ulysses; Browning's Home Thoughts from Abroad, Home Thoughts from the Sea, Evelyn Hope, My Last Duchess, Andrea del Sarto; Arnold's Rugby Chapel, Dover Beach.

Latin

Composition and Sight Translation. Bradley-Arnold Latin Composition. First term, Exercises 1-15; second term, Exercises 16-32. Sight translation based on the authors read.

Authors. First term—Cicero, Pro Ligario; Horace, Odes (selected); Virgil, Aeneid II (first part). Second term—Cicero, Pro Archia; Horace, Epodes (selected); Virgil, Aeneid II (second part).

Greek

Composition and Sight Translation. Pitman's Greek Prose Composition. First term—Exercises 13-29. Second term—Exercises 30-44. Sight translation based on the authors read.

Authors. First term—Demosthenes, First Olynthiac; Plato, Crito (first part); Homer, Iliad I (first part). Second term—Plato, Crito (second part); Homer, Iliad I (second part).

French

Grammar, Composition and Sight Translation. First term—Fraser and Squair, High School French Grammar (to page 277); Composition; Sight Translation. Second term—Fraser and Squair, High School French Grammar (page 278 to end); Lazare, Elementary French Composition; Sight Translation; Dictation.

Authors. First term—La Bruyère, Les Caractères. Second term—Le Bourgeois Gentilhomme.

Mathematics

Algebra. Hall and Knight, Elementary Algebra, Chapters 32 to 39.

Trigonometry. Playne and Fawdry.

History

Francis, S. Betten, S. J. Modern World, Vol. I.

SECOND YEAR

English.

Composition and Rhetoric. Composition—the writing of at least two original compositions during each term with an aggregate of at least 1,500 words for each term. Coppens, Introduction to English Rhetoric, Part II., Art of Oratorical Composition—Oratory, nature and types of oratory, division of the oration, style in public speaking, methods of oratorical composition, principles of argumentation. First term—pages 1-140. second term—pages 141-307. Text: Newman, Second Spring.

English Literature. (1) First Term: (*a*) Tennyson's Gareth and Lynette, Lancelot and Elaine, The Passing of Arthur; Keats's St. Agnes Eve; Lowell's The Vision of Sir Launfal; Scott's Marmion (Gayley and Young); Arnold's Sohrab and Rustum. (*b*) Scott's Quentin Durward; Hardy's Far from the Madding Crowd.

(2) Second Term: (*a*) Chaucer's Prologue to the Canterbury Tales (Gayley and Young). (*b*) Shakespeare's Romeo and Juliet; Coriolanus.

Note.—These Courses include a knowledge of the life and times of the authors read, from Long's History of English Literature and other sources.

Latin.

Composition and Sight Translation. Bradley-Arnold Latin Prose Composition. First Term: Exercises 41-55, omitting 43, 44, 47, 48 and 51. Second Term: A continuation of this Course. Exercises 56-65, omitting 62.

Authors and Sight Translation. First Term: Cicero, Pro Murena (1st part); Horace, Epistles. Second Term: Cicero, Pro Murena (2nd part); Horace, Satires. Sight Translation based on the authors read.

Greek.

Composition. Pitman's Continuous Proses.

Authors and Sight Translation. First Term: Demosthenes, Philippic I; Euripides, Medea (1st part). Second Term: Demosthenes, Philippic II; Euripides, Medea (2nd part). Sight Translation based on the prose author read.

French.

Grammar and Composition. Text: Fraser and Squair, French Grammar and Reader. First Term: Page 220-262. Exercises. Second Term: Pages 262-the end. Exercises. One hour a week.

Authors. First Term: Selections from Bossuet. Second Term: Racine's Athalie.

Mathematics.

Analytical Geometry. The analytical geometry of the straight line, circle, parabola, ellipse and hyperbola. Crawley and Evans' Analytical Geometry to page 106.

History.

Francis S. Betten, S. J., Modern World, Vol. II.

DEPARTMENT OF HISTORY

Chester Martin, M.A., B.Litt	*Professor*
Daniel Harvey, M.A.	*Assistant Professor*
Joseph E. Howe, B.A. (Yale), M.A.	*Lecturer*

N.B.—For key to system of numbering courses, see page 4.

1. **Ancient History.** A. J. Grant, A History of Europe (Longmans), Part I., supplemented by lectures and class work.
2. **Mediaeval History.** A. J. Grant, A History of Europe (Longmans), Part II., supplemented by lectures and class work.

For Courses 1 and 2 students are advised to use the historical atlases in Everyman's Library—Classical History and European History.

3, 4. Modern History. Modern History, 1400-1648, and 1648 to the present time. An elementary text such as Adams' Mediaeval and Modern European History, pp. 157-458, will be supplemented by readings from the Rivington Series, etc. Extra-mural students are required, and intra-mural students are advised, to read Robinson's History of Western Europe, Vol. 2. Two lectures and one essay period per week.

9, 10. **Development of British Political Institutions.** A survey of British and Dominion History chiefly from the constitutional point of view.

The documentary groundwork of the course will be found in Stubbs's *Select Charters*, Prothero's *Select Statutes and other Constitutional Documents*, Gardiner's *Constitutional Documents of the Puritan Revolution*, Egerton's *Federations and Unions in the British Empire*, etc.

Emphasis during the second term will be placed upon the conflict against the Stuarts; the development of the parliamentary party and the cabinet; the practice of responsible government; the system of colonial administration and government; the American Revolution and responsible government in Canada and Nova Scotia; the American and Canadian Confederation, with subsequent confederations in the British Dominions. Three lectures and one essay period per week.

11, 12. **British History and Expansion from 1485.** These courses with 9 and 10 make up the Third Year Major Course. Emphasis, increasing through the course, will be placed on the growth of the British Empire and in addition to a text such as J. R. Green's Short History, students should possess and know J. R. Seeley, Expansion of England, and Egerton, Origin and Growth of British Colonies. For essay work and special topics students will be referred to the works of Gardiner, Firth, Macaulay, Lesky, Spencer Walpole and the biographies of Cromwell (C. H. Firth), Chatham (B. Williams), Pitt (J. Holland Rose), Gladstone (Lord Morley), Cobden (Lord Morley), Bright (G. M. Trevelyan), as well as to the more accessible books such as G. M. Trevelyan, England under the Stuarts; C. Grant Robertson, England under the Hanoverians; Marriott, England in the Nineteenth Century. Similarly for British Expansion in addition to the works of Durham and Gibben Wakefield, reference will be made to works such as those of Beer, Egerton, Lucas, Pollard (The British Empire), and others. Three hours per week.

13, 14. **European History, 1789 to Present Time.** The aim of this course is to provide an historical background to present day National and International problems. A study will be made of the outstanding characters, tendencies, movements and events of the period, among which the following may be indicated: The French Revolution, Napoleon, The Congress of Vienna, The Holy Alliance and the Concert of Europe, Metternich and the Reaction after 1815, The War of Greek Independence, The Revolution of 1830 and the Separation of Belgium from Holland, The Revolution of 1848, The Second Empire in France, The Crimean War and the Eastern Question, Reform and Reaction in Russia, The Prussianization of Germany, The Dual Monarchy of Austria-Hungary, The Union of Italy, The Franco-Prussian War and the Establishment of the German Empire, The Balkan Nationalities and the Russo-Turkish War, The Congress of Berlin, The Expansion of Europe in Asia and Africa, The Triple Alliance and the Triple Entente, The Growth of Internationalism, The Russo-Japanese War, The Turco-Italian War, The Balkan Wars, The War of 1914-18, The League of Nations and the Peace of Versailles.

A general survey of the period may be made from: Rose, The Revolutionary and Napoleonic Era; Alison Phillips, Modern Europe, or E. Lipson, Europe in the 19th Century; Anderson, Constitutions and Documents for the History of France 1789-1907; Oakes and Mowat, The Great European Treaties of the 19th Century; Robertson and Bartholomew, A Historical Atlas of Modern Europe.

Reference will be made for essays and general reading to the following primary and secondary sources among others: Memoirs of Mme. Remusat, Mme. Campan, Bourrienne, Metternich, Talleyrand, Bismarck, Crispi; Rousseau, Social Contract; Young, Travels in France; Burke, Reflections on the French Revolution; Karl Marx, Revolution and Reaction in Germany and Austria; Cambridge Modern History; Lavisse et Rambaud, Histoire Generale; Aulard, French Revolution; Carlyle, French Revolution; Acton, Lectures on the French Revolution; Madelin, The French Revolution; Fisher, Rose, Fournier, Napoleon I.; Coquelle, Napoleon and England; Seeley, Life and Times of Stein; Mahan, Influence of Sea Power on the French Revolution and Empire; Fisher, Napoleonic Statesmanship in Germany; Dawson, The Evolution of Modern Germany and the German Empire 1867-1914; Grant Robertson, Bismarck; Stillman, The Union of Italy; King, A History of Italian Unity; Thayer, Cavour; King, Mazzini; Trevelyan, Garibaldi; Fisher, Bonapartism; Simpson, The Rise of Napoleon III.; De La Gorce, Histoire du Second Empire; Seton-Watson, Racial Problems in Hungary; Forbes, History of the Balkans; Marriott, The Eastern Question in European Diplomacy; Rose, The Development of European Nations; Muir, The Expansion of Europe; Muir, Nationalism and Internationalism; Zimmern, Nationality and Government. Four hours a week.

15, 16. **Canadian History, 1763-1867.**—The following outline will suggest the chief phases to be considered: The period from the cession to the Constitutional Act in some detail; the growth of parties; the War of 1812; the opening of the West; Rebellion in Upper and in Lower Canada; Durham's Report; Responsible Government; Confederation; Manitoba. The following will be among the chief books of reference: Shortt and Doughty, Constitutional Documents, 1763-1791; Doughty and McArthur, Documents, 1791-1818; Egerton and Grant, Canadian Constitutional Development; Oliver, The Canadian North-West, 2 vols.; Durham's Report, ed. Lucas; Pope, Confederation Documents, Confederation Debates; Egerton, Canada, 1763-1901; Lucas, War of 1812; Garneau, Histoire du Canada; Shortt and Doughty (ed.), Canada and Its Provinces, 23 vols.; Wrong and Langton (ed.), Chronicles of Canada Series; The Makers of Canada Series. Three lectures and one essay period per week.

First Year, Arts: Courses 1, 2.

Second Year, Arts: Courses 3, 4.

Third Year, Arts: Major, Courses 9, 10; 11, 12.
Minor, Courses 9, 10.

Fourth Year, Arts: Major, Courses 13, 14; 15, 16.

The periods outlined for the History Majors and Minors of the Third and Fourth Years are covered by formal lectures supplemented by tutorial work with small groups of students. Essays, prepared and discussed twice a week with the instructor in charge, are intended to cover as far as possible the chief problems under consideration.

DEPARTMENT OF POLITICAL ECONOMY AND POLITICAL SCIENCE

Archibald Brown Clark, M.A. .... *Professor*
Reginald F. Jones, M.A. .... *Assistant Professor*
Lily A. McCullough, M.A., LL.B. .... *Assistant*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Economics.** The Character and Scope of Political Economy. Methods of Investigation; Economic Laws; Relation of Economic Science to Practice; Leading Principles of Consumption, Production and Distribution of Wealth. Outlines of English Economic History. First Term: Nicholson, "Elements of Political Economy," Introduction and Book I; Ashley, "Economic Organization of England," Chapters 1-4. Second Term: Nicholson, Book II; Ashley, Chapters 5-8. Four hours a week.

3, 4. **Economic Theory.** A survey of the leading principles of Political Economy, together with the chief landmarks in the history of Economic Theory. A more intensive study of the Theory of Exchange, including Value, Money, Credit, Currency and Banking, Commercial Crises, the Money-Market, the Rate of Interest and the Rate of Discount. First Term: Nicholson, "Elements of Political Economy," Books I and II (revision), Book III, chapters 1-4; Mill, "Principles of Political Economy," Book III, chapters 1-6 and 14-16; L. L. Price, "Political Economy in England," chapters 1-4. Second Term: Nicholson, Book III chapters 5-12; Mill, Book III, chapters 7-13 and 23-24, 26; H. Withers, "The Meaning of Money"; L. L. Price, chapters 5-8. Three hours a week.

5, 6. **Foreign and Colonial Trade Policy—History and Theory.** The historical development of the Theory of Foreign Trade, with special reference to Adam Smith's Critique of the Mercantile System; the Theory of International Trade and International Values; Free Trade and Protection; the Foreign Exchanges. First Term: Adam Smith, "Wealth of Nations,"Book II, chapter 5; Book III, chapter 1; Book IV, chapters 1-2; Nicholson, "A Project of Empire," chapters 1-8, 11; "Elements," Book III, chapter 13, secs. 1-4, chapter 15; Book V, chapter 7; Mill, "Principles," Book III, chapter 17; Book V, chapter 10, sec. 1; Bastable, "Theory of International Trade," chapters 1, 8, 9. Second Term: Adam Smith, Book IV, chapters 3-8; Nicholson, "Project of Empire," chapters 7-16; "Elements," Book III, chapter 13, secs. 5, 6, chapter 14; Book V, chapter 9; Mill, Book III, chapters 18-22, 25; Bastable, chapters 2-7, 10, and appendices; Withers, chapter 10. Two hours a week.

7, 8. **Economic History.** The chief landmarks in English Economic History in Mediaeval times, and a more detailed study of the Modern period; The Manor; The Gilds; The Black Death and the Peasants' Revolt; Transition from Mediaeval to Modern Economic Conditions; The Elizabethan Regulation of Industry and Commerce; The Poor Law; Foreign Trade Companies; Colonisation and Colonial Policy; Origin and Development of Banking; The Industrial Revolution; Trade Unionism; Factory Legislation; The Free Trade Movement. First Term: Cunningham, "Growth of English Industry and Commerce," vol. II, Part I, pp. 1-402. Second Term: Cunningham, Part I, pp. 403-608, and Part II. Two hours a week.

9, 10. (Minor) **Economic Theory.** A survey of the leading principles of Economics, together with the chief landmarks in the history of Economic Theory. A more intensive study of the Theory of Exchange, including Value, Money, Credit, Banking, the Rate of Interest and the Rate of Discount, International Trade, and the Foreign Exchanges. First Term: Nicholson, "Elements of Political Economy," Books I and II (revision), Book III, chapters 1-4, chapter 13, secs. 1-4, chapter 15; Book V, chapter 7; Mill, "Principles of Political Economy," Book III, chapters 1-6, 14-17; Book V, chapter 10, sec. 1; Bastable, "Theory of International Trade," chapters 1, 8, 9; L. L. Price, "Political Economy in England," chapters 1-4. Second Term: Nicholson, Book III, chapters 5-12; chapter 13, secs. 5, 6; chapter 14; Book V, chapter 9; Mill, Book III, chapters 7-13, 18-26; Withers, "The Meaning of Money"; Bastable, chapters 2-7, 10 and appendices; L. L. Price, chapters 5-8. Four hours a week.

11, 12. **Political Economy** (for Accountants, Bankers and Business Men). A general survey of the principles governing Production and Distribution of Wealth; and a more intensive study of the Theory of Exchange, including Value, Money, Credit, Banking, the Money-market, the Rate of Interest and the Rate of Discount, International Trade, the Foreign Exchanges, and the Stock Exchange.

Reading in supplement of the lectures: Nicholson, "Elements of Political Economy," a general knowledge of Books I and II, with a more exact knowledge of Book III; Withers, "The Meaning of Money"; Hammond and Jenk's, "Great American Issues." Two hours a week.

13, 14. **Economic Theory.** (a) A critical study of some of the more difficult problems in Economic Theory and the History of Theory, and (b) Application of Economic Principles to the more important present-day Economic Problems. Marshall, "Industry and Trade." Two hours a week.

For reading in supplement of the lectures, references will be given to the works of the leading authorities on the subjects under discussion.

15, 16. **Public Finance.** The characteristics and principles of Taxation and Public Expenditure; The Incidence of Taxation; Provincial and Municipal Taxation in Western Canada; National Credit and National Debts. Adam Smith, "Wealth of Nations," Book V, chapters 2, 3; Mill, "Principles," Book V, chapters 2-7; Nicholson, "Principles," Vol. III, Book V, chapters 5-13, 15-18; Seligman, "Essays in Taxation," and certain chapters in the same author's "Shifting and Incidence of Taxation," and in Bastable's "Public Finance." Three hours a week.

17, 18. **Political Science.** A critical study of Political Theories in their relation to actual political development, and a survey of Comparative Politics. The Nature and Origin of the State; Forms of Government; The Sphere of the State; Principles, Methods and Limitations of Governmental Interference; The Organisation of Government; Distribution of Powers.

For reading in supplement of the lectures, students will be referred to: Pollock, "History of the Science of Politics"; I. J. C. Brown, "English Political Theory"; Hobbes, "Leviathan," Part I, chapters 13-15, Part II; Locke, "Civil Government," Book II; Rousseau, "Contrat Social" (Eng. Trans.); Mill, "On Liberty," and "Principles of Political Economy," Book V, chapters 1, 8-11; Adam Smith, "Wealth of Nations," Book V, chapter 1; Nicholson, "Principles of Political Economy," Vol. III, Book V, chapters 1 to 4; Hobhouse, "Liberalism"; and to the relevant parts of Maine, "Early History of Institutions"; Sidgwick, "Elements of Politics" and "Development of European Polity"; Mill, "Representative Government"; Bagehot, "English Constitution"; Lowell, "The Government of

England" and "Governments and Parties in Continental Europe"; Bryce, "The American Commonwealth," "Studies in History and Jurisprudence" and "Democracy"; Keith, "Responsible Government in the Dominions" and "Imperial Unity and the Dominions." Two hours a week.

19, 20 (Minor) **Economic and Political Theory.** A study of the nature, measurement, and governing principles of Economic Progress, together with the Economic Functions of Government and Public Finance, and Modern Political Thought. First Term: Nicholson, "Principles of Political Economy," vol. III, Book IV, chapters 1-3; Book V, chapters 1-4, 14, 19; Mill, "Principles," Book V, chapters 1, 8-11; Adam Smith, "Wealth of Nations," Book V, chapter 1; L. T. Hobhouse, "Liberalism," chapters 1-4. Second Term: Nicholson, Book IV, chapters 4-7; Book V, chapters 5-13, 15-18; Mill, Book V, chapters 2-7; Adam Smith, Book V, chapters 2, 3; Hobhouse, chapters 5-9. Four hours a week.

GRADUATE COURSES

(*Lectures may not be offered on these Courses in 1921-22.*)

21, 22. **Political Economy** (Principal Subject). Marshall, "Principles of Economics." Books of reference (critical); Haney, "History of Economic Thought"; Keynes, "Scope and Method of Political Economy"; Nicholson, "War Finance"; Seligman, "The Income Tax." (Two Papers and Thesis.)

23, 24. **Economic History** (Subordinate Subject). Nicholson, "Rents, Wages and Profits in Agriculture"; Taussig, "Some Aspects of the Tariff Question"; Conant, "History of Modern Banks of Issue." (One Paper).

25, 26. **Political Science** (Subordinate Subject). Dicey, "Law and Public Opinion in England"; MacCunn, "Six Radical Thinkers"; E. Barker, "Political Thought in England from Herbert Spencer to the Present Day." (One Paper).

Note.—Candidates for the M.A. Degree in this Department may combine Political Economy with *either* (a) Economic History or (b) Political Science.

Second Year, Arts: Courses 1, 2.

Third Year, Arts: Major: Courses 3, 4, 5, 6, 7, 8.
Minor: Courses 9, 10.

Fourth Year, Arts: Major: Courses 13, 14; 15, 16; and 17, 18 or 19, 20.
Minor: Courses 19, 20.

Graduate Courses, Arts: Courses 21, 22; 23, 24; 25, 26.

Special Courses: Accountancy: Courses 11, 12.
Banking: Courses 3, 4.
Insurance: Part of Courses 15, 16. (Two hours a week. Half of Joint Minor Course with Department of Mathematics.)

DEPARTMENT OF MATHEMATICS AND ASTRONOMY

Neil Bruce MacLean, D.S.O., M.A., F.R.A.S.C. .... *Professor*
Norman R. Wilson, M.A., Ph.D. .... *Professor*
Lloyd A. H. Warren, M.A., Ph.D., F.R.A.S. .... *Assistant Professor*
William Tier, M.A. .... *Assistant Professor*
Frederick S. Nowlan, M.A. .... *Lecturer*

N.B.—For key to system of numbering courses, see page 4.

PURE MATHEMATICS

1. **Algebra.** A review of the solution (graphical and analytical) of equations up to and including simultaneous quadratics; the theory of quadratic equations; and the work contained in A. T. DeLury's Intermediate Algebra (Copp, Clark Co.) to page 130, omitting Chapters I, IV; article 2, page 94; article 3, page 96; article 3, page 108; article 4, page 110. Four hours per week.

4. **Analytical Geometry.** The analytical geometry of the straight line, circle, parabola, ellipse and hyperbola. Crawley and Evans' Analytical Geometry (University of Pennsylvania, Philadelphia) to page 106. Four hours per week.

5, 6. **Plane Trigonometry.** Playne and Fawdry's Practical Trigonometry (Copp, Clark Co.). Students are required to become familiar with the use of tables in the solution of problems. For students in Arts and Science, two hours per week; for students in Engineering, two hours per week, First Term; three hours per week, Second Term.

7. **Synthetic Solid Geometry.** Hall and Stevens' "A School Geometry," Part VI (Macmillan Co.). Theorems 81, 83, 84, 91, 92, 94, 97, 98, and pages 383-442; or the corresponding work in Betz and Webb's Solid Geometry (Ginn & Co.). Two hours per week.

9. **Synthetic Plane Geometry.** A course specially selected to meet the needs of Engineering students. The text to be used will be announced at the opening of the session. Two hours per week.

10. **Algebra.** The binomial, exponential and logarithmic series; other series; surds and imaginary quantities; mathematical induction; undetermined coefficients; partial fractions. This work may be found in Hall and Knight's Higher Algebra, (Macmillan & Co.). Two hours per week.

11. **General Mathematics.** A short course in mathematics, especially designed for students in Senior Matriculation for Medicine. Arithmetical progression; geometrical progression, with applications to compound interest, annuities, debentures, sinking funds and life insurance. A brief introduction to Trigonometry up to the solution of right-angle triangles; graphs of statistics; analytical geometry of the straight line, and those properties of the circle, the parabola and ellipse which have practical applications. Four hours per week.

13. **Analytical Geometry, Plane and Solid.** A continuation of Course 4. Analytical Plane Geometry, with a brief introduction to Analytical Solid Geometry. Crawley and Evans' Analytical Geometry, page 107 to the end. Four hours per week.

16. **Calculus.** An elementary course in Differential and Integral Calculus with practical applications. Differentiation of algebraic and trigonometric functions, with corresponding integrations, measurement of rates, motion in curved paths, maxima and minima, definite integrals, areas and lengths of curves, volumes and surfaces. Calculus, March & Wolff, (McGraw-Hill Book Co., New York), to page 196, omitting sections 38, 51-54, 66, 67, 72, 74, 79-81, 84, 86-88, 91, 102. Four hours per week.

17. **Analytical Geometry.** Selections from Crawley and Evans's Analytical Geometry, page 107 to the end. Three hours per week.

19, 20. **Algebra.** Elementary Determinants and their application to the solution of linear equations; continued fractions; hyperbolic functions; graphs of algebraic, trigonometric, inverse, exponential, logarithmic and hyperbolic functions; limiting values and vanishing fractions. Two hours per week.

21, 22. **Calculus.** An elementary course with practical applications. Differentiation, measurement of rates, motion in curved paths, maxima and minima, partial derivatives, tangents and normals, curvature, evolutes, expansions, formation of differential equations, integration, areas and lengths of curves, volumes and surfaces. A course designed for Engineering students. Calculus, March and Wolff. Four hours per week, first term; two hours per week, second term.

23. **Differential Equations.** A short course specially adapted to meet the needs of students in Engineering and which will include special topics in Engineering mathematics. Text book announced later. Two hours per week.

25, 26. **Algebra—Determinants and Theory of Equations.** A continuation of Course 10. Hall and Knight's Higher Algebra, Chapters 19-26 inclusive, Chapter 29 and Chapters 33-35 inclusive. Two hours per week.

29, 30. **Differential and Integral Calculus.** A continuation of course 16. Integration, partial derivatives, tangents and normals to curves and surfaces, curvature, evolutes, expansions, formation of differential equations, nth derivatives, Leibnitz's theorem, indeterminate forms, maxima and minima, reduction formulae, double and triple integration. Calculus, March and Wolff. Three hours per week.

31. **Spherical Trigonometry.** Inverse notation, derivation of formulae, solution of the spherical triangle, areas of spherical triangles and polygons, applications to practical problems. Moritz' Spherical Trigonometry. (John Wiley, & Sons, New-York.) Two hours per week.

37, 38. **Advanced Calculus.** A continuation of Course 29, 30. (a) Differential Calculus. Expansions; maxima and minima; various equations of a curve; derived curves; envelopes; asymptotes; singular points. (b) Integral Calculus. Volumes by triple integration; definite integrals; beta and gamma functions; pedals and roulettes; Steiner's and Holditch's Theorems; the planimeter. Three hours per week.

39, 40. **Differential Equations.** Methods used in elementary practical applications to physical and engineering problems, symbolic methods, geometrical applications and elementary general theory. Murray, Differential Equations, (Longmans, Green & Co., New York.) Two hours per week.

41. **History of Mathematics.** The historical development of number systems, arithmetic, algebra, geometry, trigonometry and calculus, from the earliest times to the present. Two hours per week.

44. **Advanced Analytical Geometry.** Advanced work in conic sections, and an extension of the work in solid geometry of Course 13. The Department has a considerable number of the splendid thread and plaster models of Brill, for illustrating the teaching of geometry of three dimensions. Two hours per week.

45, 46. **Projective Geometry.** A course in modern projective geometry. Detailed outline and text book announced later. Two hours per week.

APPLIED MATHEMATICS.

52. **Solid Geometry and Mensuration.** Course in solid geometry as outlined in 7. The mensuration of plane and solid figures. Superficial area, and volume of the pyramid, cone, cylinder, sphere, wedge, frustums, segments, zones, sectors; the prismoidal formula; applications to problems in connection with the earth; lengths of open and crossed belts. Betz and Webb's Solid Geometry. Four hours per week.

54. **The Theory of Errors and Method of Least Squares.** The general principles of probability, the law of error, direct measurements of equal and different weights, mean square and probable errors, indirect measurements; conditioned observations; applications to empirical constants and formulae. One hour per week.

55, 56. **Analytical Mechanics.** Centres of gravity, moments of inertia, pressure and centres of pressure of fluids; statics of flexible cords, cords on rough surfaces; rectilinear and curvilinear motions; pendulums; projectiles; rotary motion; work and energy; friction; dynamics of rigid bodies; impact. Hancock, Applied Mechanics for Engineers, (Macmillan Co., New York). Arts and Science, two hours per week. Engineering, four hours per week, second term. *Assistant Professor Warren.*

57, 58. **Analytical Mechanics.** Vectors, centroids, flexible cords, friction systems of particles and rigid bodies, equilibrium on a smooth or rough plane curve, skew curve or surface, centres of gravity, work, attraction and potential, stable and unstable equilibrium; velocity, acceleration, relative motion, rectilinear and curvilinear motion, motion in resisting media, law of gravitation, central orbits, constrained motion, pendulums, rotary motion, energy, dynamics of rigid bodies, impact. Theoretical Mechanics, Smith and Langley, (Ginn & Co.) Three hours per week. *Assistant Professor Warren.*

61, 62. **Celestial Mechanics.** Curvilinear motion, central orbits, derivation of Newton's law; determination of the orbit from the law of force; potential and attraction of bodies; the problem of two bodies; the problem of n bodies; the problem of three bodies; Lagrangian straight line and equilateral triangular solutions of the three body problem, surfaces of zero relative velocity, etc.; geometrical and analytical consideration of perturbations. Moulton, Introduction to Celestial Mechanics, (Macmillan Co., New York). Three hours per week.

ACTUARIAL SCIENCE

71, 72. **The Mathematical Theory of Investment.** Interest and discount; equation of payments; annuities certain; amortization of debts; amortization schedules; valuation of bonds, debentures and other securities; depreciation; building and loan associations; Skinner's Mathematical Theory of Investment, (Ginn & Co.) Institute of Actuaries' Text Book Part I. Two hours per week. *Assistant Professor Warren.*

73. **Theory of Probability.** The general theory of probability; the mortality table; probabilities of life; expectations of life; survivorship probability; formulae for the law of mortality. Hall and Knight's Higher Algebra; Institute of Actuaries Text Book, Part II. Two hours per week. *Assistant Professor Warren.*

74. **Principles of Life Insurance.** Life annuities; classification of policies; calculation of net premiums, loading, reserves; surplus, dividends, participating and non-participating policies; surrender values; policy oans; policy contracts; actuarial selection of risks; substandard lives; raternal and assessment insurance; industrial insurance; group in-

surance; governmental supervision. Notes on Life Insurance by E. B. Fackler. Two hours per week. *Assistant Professor Warren.*

76. **Finite Differences.** A course of lectures on the Calculus of Finite Differences and the theory of operators. Fundamental difference forms, factorial expansions, symbols of operation, Herschel's and Maclaurin's Theorems, interpolation formulae, statistical applications, approximations, mechanical quadratures, finite integration, Euler-MacLaurin sum series (Lubbock's, Woolhouse's and Hardy's formulae), convergency, difference equations. Burn and Brown, The Elements of Finite Differences. Two hours per week. *Assistant Professor Warren.*

78. **The Theory of Errors and Method of Least Squares.** See Applied Mathematics, Course 54.

ASTRONOMY

91, 92. **General Astronomy.** The constellations; the telescope; systems of co-ordinates; problems of the earth; Kepler's laws; gravitation; tides; moon; eclipses; time; solar system; comets and meteors; sun; stars; nebulae; evolution of solar system; spectrum analysis. Moulton, Introduction to Astronomy, (Macmillan & Co., New York). Two hours per week lectures. One hour per week laboratory work or evening observations.

93. **Descriptive and General Astronomy.** A short course specially devoted to those parts of astronomy necessary in surveying. The shape and motions of the earth; the constellations; systems of co-ordinates; refraction; aberration; parallax, eclipses; time, equation of time, conversion of time. General Astronomy by C. A. Young (Ginn & Co.; new edition). Two hours per week. Evening observations. *Professor MacLean* and *Assistant Professor Warren.*

96. **Mathematical and Practical Astronomy.** The solution of the astronomical triangle; time; conversion of time; the ephemeris; determination for any date of the apparent places of stars from the star catalogues; corrections for refraction, parallax, diurnal aberration and dip, to be applied to observed co-ordinates; description and working principles of the sextant, transit theodolite, observatory transit, and zenith telescope; the errors of these instruments and methods of dealing with them; methods of determining latitude, time, longitude and azimuth; practical observations and their reduction. Two hours per week. *Professor MacLean.*

97, 98. **Celestial Mechanics.** See Applied Mathematics, Course 61, 62.

GRADUATE COURSES.

The following courses in graduate study will be offered from time to time. A selection will be made at the beginning of each session to meet the needs and qualifications of students desiring such work.

Elliptic Integrals and Fourier Series. *Professor MacLean.*
Calculus of Variations (Elementary Course). *Professor Wilson.*
History of Mathematics. *Professor Wilson.*
Theory of Functions of a Real Variable. *Professor Wilson.*
Theory of Functions of a Complex Variable. *Assistant Professor Warren.*
Celestial Mechanics. *Assistant Professor Warren.*
An Advanced Course in Actuarial Science. *Assistant Professor Warren.*
Modern Analytical Geometry.
Advanced Theory of Conics.
Higher Plane Curves.

Senior Matriculation for Medicine: Course 11.

Senior Matriculation for Engineering: Courses 1; 4; 5, 6; 9; 10.

First Year, Arts: Required of all students, Courses 1; 4.
Mathematics Option, Courses 5, 6; 7; 10.

Second Year, Arts, Mathematics: Courses 13; 16.

Second Year, Arts, Astronomy: Courses 91, 92.

Third Year, Arts: Full Course*: Courses 25, 26; 29, 30; 31; 44; 55, 56; 71, 72.
Major and Minor: Courses 29, 30; and a selection from 25, 26; 31, 44; 55, 56; 71, 72.
Div. A, Nat. and Phys. Science: Courses 29, 30; 55, 56.
Div. B, Nat. and Phys. Science—Mathematics: Courses 29, 30; 55, 56.
Div. B, Nat. and Phys. Science—Astronomy: Courses 31; 54; 91, 92.

Fourth Year, Arts: Full Course*: Courses 37, 38; 39, 40; 57, 58; 73, 74; 76; 93; 96.
Major: Course 39, 40; and a selection from Courses 37, 38; 57, 58; 71, 72; 73, 74; 76; 93; 96.
Minor: A selection from Courses 37, 38; 39, 40; 57, 58; 71, 72; 73, 74; 76; 93; 96.
Div. A, Nat. and Phys. Science: Courses 39, 40; 57, 58.
Div. B, Nat. and Phys. Science—Mathematics: Courses 39, 40; 57, 58.
Div. B, Nat. and Phys. Science—Astronomy: Courses 93; 96; 97, 98.
Minor in Finance: Course 71, 72; or 73, 74.

First Year, Home Economics: Courses 1; 4.

First Year, Pharmacy Degree Course: Courses 1; 4; 5, 6.

First Year, Science: Courses 1; 4; 5, 6.

Second Year, Science—Mathematics I: Courses 7; 10; 13; 16.
Mathematics II: Courses 7; 16.

Third Year, Science—Mathematics: Courses 29, 30; 55, 56.
Astronomy: Courses 31, 54; 91, 92; 93; 96.

Fourth Year, Science—Mathematics: Courses 39, 40; 61, 62; balance to be outlined.

First Year, Architecture: Courses 1; 4; 5, 6.
Second Year, Architecture: Courses 17; 52.
First Year, Engineering: Courses 17; 19; 20; 52; 93.
Second Year, Engineering—Courses 21; 22; 31; 55, 56.
Third Year, Civil Engineering: Courses 54; 96.
Third Year, Electrical and Mechanical Engineering: Course 23.

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* See page 78 for Courses in Physics required of students taking the Mathematics Course.

DEPARTMENT OF PHYSICS

Frank Allen, M.A., Ph.D., F.R.S.C.	*Professor*
R. K. McClung, M.A., D.Sc., F.R.S.C.	*Assistant Professor*
C. D. Miller, B.S., Ph.D.	*Assistant Professor*
J. S. Abel, B.Sc. (C.E.)	*Demonstrator*
A. S. Williams, B.Sc. (E.E.)	*Demonstrator*
M. S. Hollenberg, M.A.	*Demonstrator*
A. Hollenberg, B.A.	*Demonstrator*

N.B.—For key to system of numbering courses, see page 4.

*1, 2. **General Physics.** An introductory lecture course, illustrated by experiments, covering in the first term, Mechanics, Hydrostatics and heat, and, in the second term, Magnetism, Electricity, Radioactivity, Sound and Light. No text book is employed, but the ground is fairly well covered by Gage's Principles of Physics (Goodspeed). Three hours a week. *Professor Allen.*

3, 4. **General Physics (Practical).** A laboratory course to be taken by all students who take the lecture courses 1, 2. It is intended that the students shall acquire facility in the use of physical apparatus, in making records, and in computing results from the data obtained. A special laboratory note book must be kept by each student, which must contain complete details of all experimental work. The note book is necessary in order to obtain credit for the course.

One practical period per week. *Assistant Professor Miller.*

5, 6. **Mechanics, Heat and Sound.** A more advanced course in which special attention is given to the derivation of formulae and the solving of problems. Three hours per week.

7, 8. **Electricity, Magnetism and Light.** This course is similar in character and method to Course 5, 6. *Professor Allen.*

9, 10. **General Physics.** A more advanced course than 1, 2, covering, in the first term, Mechanics, Heat and Sound, and in the second term, Magnetism, Electricity and Light. Prerequisites, courses 1, 2, and 3, 4. Three hours per week. *Professor Allen.*

11, 12. **Mechanics.** A course in Statics and Dynamics involving the fundamental principles, with special attention to their application to engineering problems. It is designed especially for Engineering students. Two hours per week. *Assistant Professor McClung.*

13, 14. **Heat, Light and Sound.** This course is similar in character and purpose to course 11, 12, with which it is taken concurrently. Two hours per week. *Assistant Professor McClung.*

15, 16. **Electricity and Magnetism.** A course similar in character and purpose to the two preceding courses. Two hours per week. *Assistant Professor McClung.*

17, 18. **Mechanics, Heat and Sound.** A laboratory course in the theory and methods of physical measurements. Students are to perform an extensive series of experiments, and the results of each experiment are to be presented in a suitable report. Whenever possible, graphical methods are to be used. It is highly desirable that students should have an elementary knowledge of Analytical Geometry and Calculus. One practical period of three hours per week for each student. *Assistant Professor McClung, and*——————

19, 20. **Electricity, Magnetism and Light.** A laboratory course similar in character and method to Course 17, 18. One practical period of three hours per week for each student *Assistant Professor McClung,* ————.

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*Students in Arts intending to take any of the divisions of the special Course in Natural and Physical Science or the Special Course in Mathematics are strongly urged to elect this course in their First Year.

21, 22. **Mechanics, Heat, Light and Sound.** A laboratory course similar in character and method to course 17, 18, especially for Engineering students. One practical period of three hours per week under the direction of Assistant Professor McClung.

23, 24. **Electricity and Magnetism.** A course similar to course 19, 20, especially for Engineering students. One practical period of three hours per week under the direction of Assistant Professor McClung.

25, 26. **Electrical Measurements.** This course comprises a more advanced study, both theoretical and practical, of electrical measurements, and is especially suited to students in Electrical Engineering. It will involve the use of electrical standards, quantitative measurements of capacity of condensers, self and mutual induction, magnetic induction and hysteresis, potentiometer measurements, high and low resistance and photometry. *Assistant Professor McClung.*

27, 28. **Electricity, Magnetism and Light.** A lecture course in which special emphasis is placed on basic facts and ideas, and on mathematical methods used in dealing with these subjects. Three hours per week.

29, 30. **Electricity, Light and Radio-Activity.** An advanced lecture course for the Fourth Year of the Science Curriculum. Four hours per week.

31, 32. An advanced general laboratory course for the Fourth Year Science Curriculum. The experimental work undertaken will be varied to meet the special needs of students as far as the resources of the department permit. Research problems may also be studied. Eight hours per week. *Professor Allen.*

The laboratory and its equipment are available whenever possible to anyone desirous of engaging in original investigation in Physics.

TEXT BOOKS.

A Text Book of Physics (Watson); General Physics (Crew); The Tutorial Physics; Gage's Principles of Physics (Goodspeed); General Physics for Students (Edser); Heat for Advanced Students (Edser); Light for Students (Edser); Electricity and Magnetism (Hadley).

Senior Matriculation for Medicine: Courses 1, 2; 3, 4.
First Year, Arts: Courses 1, 2; 3, 4.
Second Year, Arts: Courses 9, 10, and selected parts of Courses 17, 18, and 19, 20.
Third Year, Arts: General; Courses 1, 2; 3, 4.
Mathematics; Courses 5, 6; 17, 18.
Natural and Physical Science; Courses 5, 6; 17, 18.
Fourth Year, Arts: Mathematics; Courses 7, 8; 19, 20.
Natural and Physical Science; Courses 7, 8; 19, 20.
First Year, Science: Courses 1, 2; 3, 4.
Second Year, Science: Courses 9, 10; 17, 18.
Third Year, Science: Courses 27, 28; 19, 20.
Fourth Year, Science: Courses 29, 30; 25, 26; 31, 32.
Second Year, Pharmacy: Courses 1, 2; 3, 4.
First Year, Pharmacy (Degree Course): Courses 1, 2, 3, 4.
Second Year, Pharmacy (Degree Course): Courses 9, 10, 17, 18.
First Year, Engineering: Courses 11, 12; 13, 14; 21, 22.
Second Year, Engineering: Courses 15, 16; 23, 24.
Third Year, Engineering (Electrical): Courses 25, 26.
First Year, Architecture: Courses 1, 2; 3, 4.
Second Year, Architecture: Courses 11, 12; 13, 14

DEPARTMENT OF BOTANY

A. H. Reginald Buller, B.Sc., Ph.D., D.Sc., F.R.S.C.........................*Professor*
H. F. Roberts, B.A., M.Sc., LL.B., F.A.A.S.......................*Assistant Professor*
C. W. Lowe, M.Sc..*Lecturer*
Ida Kirk Scott, B.A...*Demonstrator*

N.B.—For key to system of numbering courses, see page 4.

1, 2. General Botany. An introductory lecture course covering, among other topics, the following: Classification of objects; comparison of living and non-living matter; the differences between animals and plants. The structure of the seed and contents of its cells; the seeds of the pea, bean, castor oil plant, and date palm; the grains of wheat and corn; the conditions for germination and the phenomena accompanying it; the exhaustion of the reserve food-stuffs. The seedling: its structure, mode of development and relations with external conditions; the theory of irritability; geotropism, heliotropism and hydrotropism; the further development of shoot and root. The general morphology of the plant body, and the principal modifications of the stem, leaf and root; buds, grass-haulms, stolons, runners, rhizomes, corms, tubers, bulbs, spines and thorns, tendrils, cladodes, phyllodes, compound leaves, etc,; the growing point of stems; the origin of new leaves and buds. The cell and the cell theory; protoplasm as the physical basis of life; protoplasmic movement; turgidity; the structure and division of the nucleus; the origin of new cells by cell division. The internal morphology of the stem of monocotyledons and of dicotyledons; the functions of vascular bundles; the cambium and the secondary thickening of stems and roots; the secondary protective tissues, cork and bark. The leaf as an organ for carrying on the process of photosynthesis; the epidermis, including hairs and stomata, vascular bundles, mesophyll, and intercellular spaces; photosynthesis (carbon assimilation); the nature and function of chlorophyll corpuscles and of chlorophyll; the evacuation of the products of photosynthesis and their ultimate fate. The root: its root-tip, root-hairs, and mode of branching; the growing point. Climbing plants; stem-climbers and tendril-climbers; the physiology of climbing; lateral geotropism; reactions to the stimulus of contact. The elementary facts in the nutrition of the plant; the nature and sources of the raw food materials; the necessary chemical elements and their mode of absorption; water cultures; the constitution of the soil; the transpiration current; transpiration; photosynthesis; the products of metabolism, together with their distribution, storage, and utilization; respiration contrasted with photosynthesis. Carnivorous plants; Drosera, Utricularia, Sarracenia, Dionaea and Nepenthes. The classification of plants, including the main sub-divisions of the vegetable kingdom; the morphology and physiology of the following Thallophyta: Protococcus (Pleurococcus), Saccharomyces (yeast), Bacteria, Spirogyra, Fucus, Mucor, Penicillium, Psalliota campestris (mushroom). Alcoholic fermentation; Bacteria as the cause of nitrogen fixation, of fermentative processes, of putrefaction, and of disease. The Bryophyta, illustrated by a moss plant; the Pteridophyta, illustrated by a fern plant; alteration of generations. Reproduction in the Phanerogamia; the flower and its chief modifications in structural plan; the minute structure of the pollen grain and of the ovule; pollination and its agents; floral mechanisms as illustrated by the lady slipper, Orchid, Primula, Salvia, etc. Fertilization of the ovule; development of seeds and fruits; the plum, strawberry, orange, cocoanut, etc.; dispersion of seeds and fruits; the nature of pine cones, both male and female. Two hours a week.

3, 4. Laboratory Course in General Botany. This course is designed to accompany Course 1, 2. One practical period of two hours per week.

3a, 4a. Laboratory Course in General Botany. This course for students in Arts is designed to accompany courses 1, 2. One practical period of two hours fortnightly.

5, 6. **Morphology and Physiology of the Flowering Plant.** A lecture course of two hours per week.

7, 8. **Laboratory Course on Morphology and Physiology of the Flowering Plant.** One period of two hours per week.

9, 10. **Systematic Botany of the Cryptogamia and Phanerogamia.** A detailed treatment of the Thallophyta, Bryophyta, Pteridophyta and the facts of reproduction in the Phanerogamia. A lecture course of three hours per week.

11, 12. **Laboratory Course in Systematic Botany.** This course is designed to accompany Course 9, 10. Five hours per week.

14. **Evolution and Inheritance.** A broad treatment of the Doctrine of Evolution, Mendel's Laws of Inheritance, etc. One hour per week.

15, 16. **Special Courses.** Advanced lectures on Morphology, Physiology, Ecology, Palæobotany, Inheritance, etc. Four hours per week.

17, 18. **Laboratory Course for Advanced Botany.** This course is designed to accompany Courses 14, 15 and 16. Nine hours per week.

19. **Genetics.** This course is designed to deal with the principles of genetics, especially in relation to plant life. It involves a study of the laws underlying inheritance, the causes of variation, and the physical basis of heredity. The practical features of plant breeding are dealt with in detail.

20. **Advanced Plant Physiology.** In this course, intended for those who have completed the Courses 7 and 8, special problems in plant physiology, *e.g.* osmosis, transpiration, photosynthesis, are assigned to each student.

Senior Matriculation for Medicine: Courses 1, 2; 3, 4.
Second Year, Arts: Courses 1, 2; 3a, 4a.
Third Year, Arts: Courses 5, 6; 7, 8.
Fourth Year, Arts: Courses 9, 10; 11, 12; 14, 19, 20.
Second Year, Science: Courses 1, 2, 7, 8.
Third Year, Science: Courses 9, 10, 11, 12; 14.
Fourth Year, Science:.... Courses 15, 16; 17, 18, 19, 20.
Second Year, Pharmacy: Courses 1, 2; 3, 4.
Second Year, Pharmacy (Degree Course): Courses 1, 2, 7, 8.
Third Year, Pharmacy (Degree Course): Courses 9, 10, 11, 12, 14.

TEXT BOOKS

Sargent: Plants and their Uses; Bergen & Caldwell: Practical Botany; Strasburger: Text Book of Botany; Coulter, Barnes & Cowles: Text Book of Botany; R. C. Punnett, Mendelism; W. Lochhead, An Introduction to Heredity and Genetics.

At the beginning of the session there will be several excursions to the prairie, woods and river side for the purpose of studying the algae, fungi, and flowering plants in relation to their environment. Students are recommended to acquaint themselves with the Canadian orders of flowering plants during the summer vacation. The most suitable flora is Gray's New Manual of Botany.

The laboratory of the Department will be open and encouragement will be given to any one desiring to carry on research on some botanical problem.

DEPARTMENT OF GEOLOGY AND MINERALOGY

Robert C. Wallace, M.A., Ph.D., D.Sc., F.G.S., F.R.S.C. .... *Professor*
Justin S. De Lury, B.A. .... *Assistant Professor*
Edward M. Burwash, M.A., Ph.D. .... *Assistant Professor ad interim*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **General Geology.** The more important minerals and rocks. Earth features and the forces that modify them. Structures seen in rocks. Rocks and the soil. Water supply. Ore deposits. Fossils and their meaning. Origin and age of the earth. Historical geology, in particular of Western Canada. Evolution of plant and animal life. Blackwelder and Barrows' Elements of Geology. Two hours a week.

3, 4. **Practical Demonstrations.** On minerals, rocks, and fossils, and in topographical and geological mapping. One hour a week.

5, 6. **Engineering Geology.** Similar in scope to course 1, 2, but with particular application to engineering problems, such as water supply, foundations, building stone, mining processes, and structural materials. Ries and Watson's Engineering Geology. Two hours a week.

7, 8. **Practical Geology.** Systematic examination of minerals by blowpipe and dry way tests. Identification of the commoner minerals and rocks. Mapping of geological sections. Identification of type fossils. Two hours a week.

9. **Elementary Mineralogy.** The crystalline and physical properties of minerals, in particular of the more soluble minerals. Methods of identification. Two hours a week.

11, 12. **Mineralogy and Crystallography.** Laws of crystallography. Stereographic projection. Systems and classes. Optical properties. Classification and systematic study of minerals. Genetic relationships. Rogers' Introduction to the Study of Minerals. Two hours a week.

13, 14. **Practical Mineralogy and Crystallography.** Crystal drawing. Identification of crystal forms. Goniometric investigation of single crystal. Study and identification of minerals. Two hours a week.

15, 16. **Petrology.** Optical properties of rock-forming minerals under polarising microscope. Classification of rocks. The characteristics of the various rock families. Magmatic differentiation. Physicochemical laws governing the formation of igneous, metamorphic, and sedimentary rocks. Harker's Petrology. Two hours a week.

17, 18. **Practical Petrology.** Identification of rock-forming minerals under the microscope. Study and identification of rocks in thin sections, and in hand specimens. Preparation of thin sections. Quantitative estimation of rocks. Five hours a week

19. **Economic and Mining Geology.** Nature and origin of ore deposits. Natural occurrence, methods of identification, and evaluation of the more important ores. Geological structure of chief ore-bearing regions in Canada. Mining processes. Three hours a week.

20. **Vertebrate and Invertebrate Palaeontology.** A study mainly of the invertebrates, and more especially of their hard parts. Classification, distribution, and geological range. Fossils of North America, and particularly of Western Canada. Woods' Palaeontology. Two hours a week.

22. **Practical Vertebrate and Invertebrate Palaeontology.** Preparation of material for study. Examination of collections of North American fossils. Three hours a week.

23, 24. **Advanced Economic Geology.** An exhaustive study of the genesis and mineralogy of ore deposits. The structural geology and petrography of the great mining districts of the world. Lindgren's Mineral Deposits. Two hours a week.

25, 26. **Advanced Investigations and Research.** Students in the M.A. course, and the more advanced students in the fourth year of the B.Sc. course, will carry out, under direction, independent investigations on some field or laboratory problem. The laboratories are open all day for this purpose.

27, 28. **Geological Excursions.** During October, the earlier part of November, and the latter part of March, excursions will be conducted on Saturdays to places of geological interest in the neighborhood of Winnipeg. These excursions form an integral part of the class work.

29, 30. **Extension Evening Courses.** Courses are offered in all branches of Geology, Mineralogy, Ore-Deposits, etc. The nature of the courses, their duration, etc., are arranged by consultation with those interested. The courses are free, or nominal fees only are charged for a few courses.

31, 32. **Assaying.** A course on the determination of the precious metals in ores by means of the fire assay, for those students who are able to take such a course in addition to their regular work. A knowledge of elementary chemistry is prerequisite, and some acquaintance with minerals and rocks is desirable. Three hours a week.

N.B.—Students who intend to take Geology as a final subject should, if possible, spend their summers as student assistants under the Geological Survey of Canada.

Additional Text-books Recommended for Different Courses

Text-book of Geology, Pirsson and Schuchert; Geology, Chamberlin and Salisbury; Handbook of Minerals, Butler; Crystallography, Williams; Determinative Mineralogy, Brush and Penfield; Practical Mineralogy, Rowe; Minerals and How they Occur, Miller; Palaeontology, Woods; Principles of Economic Geology, Emmons; Economic Geology, Ries; Metamorphic Geology, Leith and Mead; Manual of Petrographic Methods, Johannsen; Determination of Rock Forming Minerals, Johannsen; Quantitative Classification of Igneous Rocks, Cross, Iddings, Pirsson and Washington; Notes on Assaying, Lodge; Assaying, Fulton.

Second Year, Arts: Courses 1, 2; 3, 4.
Third Year, Arts: Natural and Physical Science, Div. A, C & D: Courses 1, 2 (if not already taken); 7, 8; 11, 12; 13, 14.
Fourth Year, Arts: General: Courses 1, 2; 3, 4.
Natural and Physical Science, Div. A, C & D: Courses 15, 16; 17, 18; 19 (optional).
Natural and Physical Science, Div. D. (additional): Courses 20 and 22, with modified Courses 17, 18.
Graduate, Arts: Courses 23, 24; 25, 26.
Second Year, Science: Courses 1, 2; 7, 8.
Third Year, Science: Courses 11, 12; 13, 14; 19; 20 and 22.
Fourth Year, Science: Courses 15, 16; 17, 18; 23, 24.
Third Year, Civil Engineering: Courses 5, 6, 7, 8.
First Year, Pharmacy (Degree Course): Course 9.
First Year, Pharmacy: Course 9.

DEPARTMENT OF CHEMISTRY

Matthew A. Parker, B.Sc., F.I.C., F.C.I.C., F.R.S.C	*Professor*
Henry P. Armes, B.Sc., Ph.D., F.C.I.C	*Assistant Professor*
John W. Shipley, B.A., Ph.D., F.C.I.C	*Assistant Professor*
I. R. McHaffie, B.A., B.Sc.	*Demonstrator*
Dorothy Mackay, B.A.	*Demonstrator*
C. A. Merritt	*Demonstrator*
Catherine Morgan	*Demonstrator*

N.B.—For key to system of numbering courses, see page 4.

The following are among the lecture courses given. These are all illustrated by experiments.

1, 2. **Elementary Inorganic Chemistry.** Fundamental principles of chemistry; elements and compounds; laws of combination; atoms and molecules; acids, bases, salts; properties of some common elements and their more important compounds. The subject is treated in an elementary way. Textbook recommended, McPherson & Henderson's An Elementary Study of Chemistry (Ginn & Co.). Two hours per week lectures, and one hour tutorial, with laboratory work in addition.

3, 4. **Inorganic Chemistry.** Similar to course 1, 2, but more advanced, and deals with some of the more general subjects barely touched on in the more elementary course. Three hours per week, one hour tutorial, with laboratory work. Textbook recommended, Smith's General Chemistry for Colleges (Century Co.).

5, 6. **Medical Chemistry.** The subjects dealt with are selected with regard to their importance for medical students. About half of the course deals with inorganic and half with organic chemistry. Three hours per week lectures, with laboratory work. Textbooks recommended, Smith's General Chemistry for Colleges (Century Co.) and Haskin's Organic Chemistry (Wiley).

7, 8. **Organic Chemistry.** An introduction to the study of organic chemistry. General principles; fatty compounds; some typical carbocyclic and a few heterocyclic compounds. Two hours per week lectures. Textbooks recommended, Perkin and Kipping's, or Holleman's Organic Chemistry.

9, 10. **Electro-Chemistry.** Theories and laws relating to practical applications of electro-chemical processes. One hour per week. Textbook recommended, Allmand's Principles of Applied Electro-Chemistry (Longmans, Green & Co.)

11, 12. **Physical Chemistry.** Introduction to Physical Chemistry. Two hours per week lectures. Textbook recommended, Lincoln's Textbook of Physical Chemistry (Heath & Co.).

13, 14. **Advanced Organic Chemistry.** Subjects chosen with reference to literature available in the library. Two hours per week.

15, 16. **Advanced Inorganic Chemistry.** Chiefly descriptive inorganic chemistry; subjects chosen with reference to literature available in the library. Two hours per week.

17, 18. **Advanced Physical Chemistry.** A continuation of Course 11, 12. Two hours per week.

19, 20. **History of Chemistry.** A brief outline of the history of some of the more important discoveries and theories of chemistry. One hour per week throughout the session.

The following *laboratory* courses are offered:

21, 22. **Practical Chemistry I.** Experiments illustrating general principles and the preparation and properties of substances studied in course 1, 2. One period of three hours per week.

23, 24. **Practical Chemistry II.** Experiments illustrating general principles and the preparation and properties of substances studied in course 3, 4. Simple qualitative analysis. One period of three hours per week.

25, 26. **Practical Chemistry III.** Preparation of some substances not included in course 21, 22; quantitative experiments illustrating fundamental laws; qualitative analysis. Three periods of two hours per week.

27, 28. **Practical Chemistry IV.** Inorganic preparations; qualitative analysis; simple gravimetric and volumetric analysis; reactions of some organic substances; preparations. Two periods of three hours per week.

29, 30. **Practical Chemistry V.** Quantitative analysis leading up to methods of water analysis, coal analysis, etc., of interest to engineering students. One period of three hours per week.

31, 32. **Practical Chemistry VI.** Preparation of organic compounds; simple quantitative inorganic analysis. Two periods of three hours per week.

33, 34. **Practical Chemistry VII.** Qualitative inorganic analysis; quantitative analysis; preparation of organic compounds. Three periods of three hours per week.

35, 36. **Practical Chemistry VIII.** Physico-chemical measurements.

37, 38. **Practical Chemistry IX.** Methods of organic analysis; organic preparations.

39, 40. **Practical Chemistry X.** Methods of inorganic analysis; inorganic preparations.

Special students may be enrolled for the purpose of carrying on such advanced work as the equipment permits of, and special facilities will be given to those capable of engaging in research work.

Each student is supplied with such apparatus as may be required, with the exception of platinum wire and foil, laboratory towel, etc., which he must provide for himself.

A deposit of five dollars is paid to the Registrar at the beginning of each session, and all breakages will be made good out of this.

A record of all laboratory work must be kept in regulation report books. These are examined periodically during the session, and must be handed to the examiners in chemistry previous to the practical examination for the degree.

Attention is called to the regulation regarding practical work and reports on pages 162 and 163.

Senior Matriculation: Courses 1, 2; 21, 22.
First Year, Arts: Courses 1, 2; 21, 22.
Second Year, Arts: Courses 1, 2; 21, 22.
Third Year, Arts: Courses 3, 4; 25, 26.
Fourth Year, Arts: Courses 7, 8; 11, 12; 33, 34.
First Year, Science: Courses 3, 4; 21, 22, 25, 26.
Second Year, Science: Courses 3, 4; 25, 26.
Third Year, Science: Courses 7, 8; 11, 12; 33, 34.
Fourth Year, Science: Courses 19, 20; two of 13, 14; 15, 16; 17, 18; and 35, 36; and one of 37, 38; 39, 40.
First Year, Medicine: Courses 5, 6; 27, 28.
First Year, Pharmacy: Courses 1, 2; 23, 24.
Second Year, Pharmacy: Courses 5, 6; 27, 28.
First Year, Pharmacy (Degree Course): Courses 1, 2, 21, 22.
Second Year, Pharmacy (Degree Course): Courses 3, 4, 25, 26.
Third Year, Pharmacy (Degree Course): Courses 7, 8, 11, 12, 33, 34.
First Year, Engineering: Courses 29, 30.
Fourth Year, Engineering (Electrical): Courses 9, 10.

DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

V. H. K. Moorhouse, M.C., B.A., M.B. .... *Professor*
K. J. Austmann, B.A., M.D. .... *Assistant*

N.B.—For key to system of numbering courses, see page 4.

2. **An Introduction to Physiology and Pharmacology.** The chief parts of the body; the skeleton (bones of the head, spine, thorax, pelvis, arm and leg); outline of the muscular system; general plan of the nervous system; the organs of digestion, circulation and respiration; the microscopic structure of the body; physiology of muscle and nerve, digestion, circulation, respiration, excretion, general metabolism; the ductless glands, the nervous system, voice and speech, locomotion, the special senses (sight, hearing, taste, smell, and touch); the physiological action of drugs. Textbook, Huxley's Elementary Physiology, latest edition. Two lectures a week, Second term (Tuesdays and Thursdays, 11 a.m.).

4. **An Introduction to Experimental Physiology.** Anatomy of the frog; ciliary motion; chief apparatus employed in experimental physiology; muscular contraction; effect of curari; tetanus; fatigue; normal beat of frog's heart; nervous control of the heart; effect of nicotine and atropine on the heart; one or two demonstrations of urine analysis. Textbook, Shâfer's Experimental Physiology (Longman's latest Ed.). Two hours laboratory work per week, Second Term (Tuesdays, 9 to 11 a.m.).

9, 10. **Elementary Physiology.** Structure and functions of the cell, and of the simple tissues (general physiological methods; graphic records; the cell as an elementary organism, functions of nucleus and protoplasm; the vital phenomena of cells; manifestations of life; stimuli and irritability). General chemistry of the animal body. Physiology of muscle (contraction of muscle; gross change in form; microscopic change; simple twitch; effects of different conditions; isometric and isotonic contraction; work of muscle; muscle wave; summation of stimuli, tetanus; voluntarycontraction; the muscle sound; physical and chemical properties of muscle; chemical and electrical changes of muscle during contraction). Physiology of nerve (transmission of the nerve impulse; rate of transmission; conductivity; electrotonus and Pfluger's law; electrical changes during contraction; negative variation). Digestion and absorption (the digestive enzymes; the tissues and mechanisms of digestion; properties of saliva, gastric juice, bile, pancreatic juice, and the succus entericus; the foodstuffs and the changes they undergo in digestion; nervous mechanism of secretion of the digestive juices; chemical mechanism of secretion; absorption by capillaries and by the villi; absorption in the large intestine; muscular mechanisms of digestion, mastication, deglutition, movements of intestine (peristaltic movements); vomiting; defæcation; the lacteals and the lymphatic system). The circulation of blood and lymph (structure and physical properties of the blood vessels; blood pressure; rate of flow of blood; action of the heart and its valves; the heart sounds; pressure in the heart cavties during a cardiac cycle; the cardiac impulse; cardiograms; the pulse; the cardiac rhythm throughout vertebrates; functions of the cardiac ganglia; innervation of the heart; the work of the heart; innervation of the blood vessels; the capillary circulation; inflammation; variations in the quantity of blood and lymph). Respiration (general mechanics of respiration; changes in the air during respiration; circumstances influencing chemical changes; respiratory changes in the blood; spectroscopic study of arterial and venous blood; derivatives of haemoglobin; respiratory changes in the lungs and tissues). Excretion (structure and functions of the kidneys;

secretion of urine; nature of tubular and glomerular secretion; chemistry of the urine; nervous mechanism of micturition; structure and functions of the skin), etc. Textbooks: Stewart, Manual of Physiology (W. B. Saunders, Philadelphia); Howell, Textbook of Physiology (W. B. Saunders, Philadelphia); Starling, Human Physiology (J. & A. Churchill, London); Reference books: Schäfer, Textbook of Physiology, 2 vols. (Young J. Pentland, Edinburgh and London); Howell, An American Textbook of Physiology, 2 vols. (W. P. Saunders, Philadelphia); Monographs in Biochemistry (Longmans, London and New York); Vincent, Internal Secretion and the Ductless Glands (Arnold, London); Hutchinson, Applied Physiology (Arnold, London) Two lectures a week, both terms (Mondays and Wednesdays, 2 p.m.)

11, 12. **Advanced Physiology.** Metabolism of proteins, fats and carbohydrates, glycosuria, diabetes; starvation; source of muscular energy; animal heat; nutrition and diet; classification of foods. Internal secretion and the ductless glands (internal secretion as applied to glands which have also an external secretion; internal secretion of the adrenals, thyroids and parathyroids; pituitary body; functions of thymus, spleen, haemal glands). Structure and functions of the nervous system (nerve cells and nerve fibres); the neurone theory; chemistry of nervous tissues; structure and functions of the spinal cord, reflex actions; structure and functions of the medulla oblongata; nuclei of cranial nerves; structure and functions of the pons varolii and cerebellum; nuclei of the cranial nerves; structure and functions of the mesencephalon, thalamencephalon, the cerebral hemispheres, cerebral cortex, motor areas; attempts to locate higher psychical functions, association areas; the nature of mind; the sympathetic and related system of nerves; the automatic fibres; preganglionic and postganglionic fibres; the cranial and sacral autonomic fibres; the enteric nervous system). Special senses (the structure and functions of the eye, ear, and nose; modes of termination of sensory nerves; the skin and tactile sensation; sensations of heat, cold and pain). Voice and speech (anatomy and physiology of the larynx; the quality, pitch and loudness of the human voice; the different voice registers; vowel sounds). Physiology of reproduction. Textbooks: As for Course 9, 10. Students at the end of their second year in Physiology will be expected to show a competent knowledge of both year's work. Two lectures a week for both terms (Tuesdays and Fridays at 2 p.m.).

13. **Elementary Practical Experimental Physiology.** Simple experiments in muscle-nerve physiology, graphic records, effects of varying conditions on muscular contractions, transmission of nerve-impulse, electrotonus, Pfluger's law, the beat of the heart and its nervous control, perfusion through blood vessels, reflex action, etc. Textbook: Schäfer, Experimental Physiology, 1912 Ed. (Longman's, London and New York). Two three-hour periods per week during one term (Mondays and Wednesdays 3 to 6 p.m.

14. **Advanced Practical Experimental Physiology.** Some of the more difficult experiments of the elementary course repeated and studied in greater detail, electro-physiology (galvanometry), blood pressure, opthalmoscope, laryngoscope, experiments upon the special senses, physiological, psychological, etc. Textbook, Alcock & Ellison, Practical Physiology (Longman's, London and New York). Two three-hour periods per week during the Second Term (Tuesdays and Fridays, 3 to 6 p.m.).

19, 20. **Advanced Laboratory Courses** are given in connection with the Fourth Year work for the B.Sc. degree. The laboratories are open daily from 9 a.m. to 11 p.m. for the prosecution of original research. Application is to be made to the Professor.

21, 22. **Practical Pharmacology.** An experimental course on the physiological action of drugs. One three-hour period per week (Thursdays).

Breakages. A deposit of $5.00 is paid to the Registrar at the beginning of each session, and all breakages will be made good from this. See page 175.

PHYSIOLOGICAL RESEARCH PRIZE

A fund has recently been raised among medical men and others interested in Physiology and will be devoted to providing annually, or at longer intervals, a prize for original investigation carried out in the Physiology Department. The following regulations govern the award of the prize:

(1) The prize shall be called "The Physiological Research Prize."

(2) The prize shall be awarded annually or biennially, or may be withheld at the discretion of the Committee (*vide infra*).

(3) The interest on the money invested shall be utilized to provide a medal and a money prize for the report on an original investigation which shall be deemed by the Committee to be of the greatest merit.

(4) The essay submitted must in each case contain an account of original investigation carried out wholly or in part in the Department of Physiology and Physiological Chemistry of the University of Manitoba.

(5) The subject of the investigation shall be some branch of Physiology or some allied medical or biological subject, and shall be approved by the Committee before the work is commenced.

(6) Work carried out in conjunction with another investigator or results published conjointly with another author may be submitted by a candidate for the prize. In such cases the Committee will take into consideration the part actually taken by the candidate in the work done. Further in such cases, the candidate must send in an account of the results obtained in the form of an essay, which must be his own unaided composition.

(7) Registered students of the University of Manitoba and members of the staff other than professors or lecturers shall be eligible to compete.

(8) Medical practitioners shall be eligible to compete on registration as students of the University.

(9) The duty of awarding the prize shall be delegated to a committee consisting of the Professor of Physiology and two others selected annually by the University Council.

(10) Essays must be in the hands of the Registrar before April 30th of each year.

Third Year, Science:	Courses 9, 10; 13.
Fourth Year, Science:	Courses 11, 12; 14; 19, 20.
Second Year, Medicine:	Courses 9, 10; 13.
Third Year, Medicine:	Courses 11, 12; 14; 21, 22.
Second Year, Pharmacy:	Courses 2, 4.
Graduate:	Courses 19, 20.

DEPARTMENT OF BIOCHEMISTRY

A. T. Cameron, M.A., B.Sc., F.I.C., F.C.I.C., F.R.S.C...*Associate Professor*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Elementary Biochemistry.** The general chemistry of animal and plant tissues. Enzyme action. The composition of food-stuffs; proteins, fats, carbohydrates, vitamines, etc. Composition of the digestive juices. Digestion of food-stuffs. Absorption of the products of digestion. Chemistry of blood; haemoglobin and its derivatives. Chemistry and physical chemistry of respiration. Secretion of urine, etc. Chemistry of the excreta. Textbooks: Hawk's Practical Physiological Chemistry (Blakiston, Philadelphia), Robertson's Principles of Biochemistry (Lea & Febiger, Philadelphia and New York), and, for reference, Mathew's Physiological Chemistry (Wood, New York). One lecture a week, both terms.

3, 4. **Advanced Biochemistry.** Metabolism. Assimilation of food units (glucose, amino-acids, fats, etc.) in the body. Catabolism. Types of inanition. Chemistry of the endocrine glands. Muscle metabolism and the production of energy. Abnormal metabolism of glucose, uric acid, creatine, etc.; acidosis. Energy requirements of the body. Heat maintenance. Diet. The importance of vitamines and other minor factors of a diet. Physical chemistry of living processes. Textbooks: as for the course in Elementary Biochemistry. Reference books as directed during the course. One lecture a week, both terms.

5, 6. **Elementary Practical Biochemistry.** Detection of the elements in animal and plant tissues. Study of enzyme action. Properties of carbohydrates, fats, and proteins, and their derivatives. Methods of estimation of sugars, fats, animo-acids, etc. Study of the digestive juices and their action. Composition of foodstuffs, etc. Text book: Hawk's Practical Physiological Chemistry (Blakiston, Philadelphia). Reference books: Plimmer's Practical Organic and Biochemistry, (Longmans, London and New York) and Onslow's Plant Biochemistry (Cambridge University Press). One three-hour period, both terms.

7, 8. **Advanced Practical Biochemistry.** Experiments on muscular and nervous tissue and on blood. Blood analysis. Oxygen capacity, respiratory quotient, acidosis. Composition of normal and pathological urine. Study of a simple problem in metabolism. Text books: as for the course in Elementary Practical Biochemistry. One three-hour period, both terms.

9, 10. **Advanced Laboratory Courses.** Will be given as required in connection with the Fourth year work for the B.Sc. degree. The laboratories are open daily from 9 a.m. to 6 p.m. (and, by arrangement, till 11 p.m.) for the prosecution of original research.

Breakages. A deposit of $5.00 is paid to the Registrar at the beginning of each session, and all breakages will be made good from this.

Second Year, Medicine:	Courses 1, 2; 5, 6.
Third Year, Medicine:	Courses 3, 4; 7, 8.
Third Year, Science:	Courses 1, 2; 5, 6.
Fourth Year, Science:	Courses 3, 4; 7, 8; 9, 10.
Graduate:	Courses 9, 10.

DEPARTMENT OF ZOOLOGY

Chas. H. O'Donoghue, D.Sc., F.Z.S.	*Professor*
C. F. Curtis Riley, M.A., M.S.	*Assistant Professor*
Eileen Bulman, M.A., B.Sc.	*Lecturer*

1, 2. **Junior Course in Zoology.** A course of lectures dealing with the general principles of zoology; the outlines of the morphology and anatomy of a progressive series of animal types, both vertebrate and invertebrate; the elements of animal physiology, cytology, histology and bionomics; the main phenomena of reproduction, behaviour, ecology, development and life histories; an elementary treatment of evolution, heredity and variation Two hours per week.

3, 4. **Junior Course in Practical Zoology.** A course of laboratory work to accompany the foregoing, providing an introduction to zoological methods. Two hours per week.

5. **Elementary Course in Zoology.** A general account of the Frog treated as an introduction to the anatomy, physiology and histology of a vertebrate type. Adapted for First Year Pharmacy students.

Text-book: O'Donoghue, Introduction to Zoology. Two hours per week.

6. **Elementary Course in Practical Zoology.** A series of practical exercises intended to accompany the preceding lecture course. Two hours per week.

7. **Introductory Course in Zoology.** The Frog and certain of the lower animals treated as an introduction to Zoology, Anatomy and Physiology. This course is adapted for the requirements of Senior Matriculation for Medicine and is preparatory to subsequent work.

Text-book: O'Donoghue, Introduction to Zoology. Two hours per week.

8. **Introductory Course in Practical Zoology.** Practical classes to accompany the preceding lecture course. Two and a half hours per week.

9, 10. **Zoology for First Year Medicine.** A course of lectures dealing with the anatomy and physiology of a progressive series of animal types (mainly vertebrate); the elements of animal histology and cytology; the main phenomena of reproduction; development and life histories and an elementary treatment of evolution, heredity and variation.

Text-book: O'Donoghue, Introduction to Zoology.

11, 12. **Practical Zoology for First Year Medicine.** A course of laboratory work to accompany the foregoing, providing an introduction to general zoological methods. Five and a half hours per week.

13, 14. **Comparative Anatomy of the Chordata.** A general account of the structure and classification of the Chordata including the evolution of the main groups. Parker and Haswell's Textbook of Zoology. Two hours per week. (Not given in 1921—22).

15, 16. **Practical Course in the Comparative Anatomy of the Chordata.** A laboratory course accompanying the above and illustrating the salient features of the anatomy, osteology and histology of the Chordata. Six hours per week. (Not given in 1921—22).

17, 18. **Comparative Anatomy of the Invertebrata.** A general account of the structure and classification of the Invertebrata including larval forms and the light they throw on the relationships of the various groups. Parker and Haswell's Text-book of Zoology. Two hours per week.

19, 20. **Practical Course in the Comparative Anatomy of the Invertebrata.** A laboratory course accompanying the above and illustrating the salient features of the gross morphology, anatomy and histology of the Invertebrata. Six hours per week.

21. **History of Zoology.** A brief account of the history of zoology with reference to the principal workers in that branch of Science and the theories they have propounded. One hour per week.

22. **Animal Behaviour.** A course treating of the simpler forms of animal responses, such as tropisms, reflexes, habits and instincts, with some attention given to intelligent acts. The viewpoints of such men as Loeb, Jennings, Lloyd Morgan, Lewis, Mills, Thorndyke, Bohn will receive consideration. One seminar or lecture each week.

24. **Animal Behaviour, Practical.** A series of practical exercises to illustrate the preceding lectures.

25. **Embryology of the Vertebrata.** The outlines of the embryology of the higher Chordata studied in a series of selected types. One hour per week.

27. **A Practical Course in the Embryology of the Vertebrata.** A laboratory course accompanying the above, providing an introduction to embryological technique and an opportunity of studying series of preparations. Three hours per week.

28. **Zoogeography.** The division of the land masses of the world into regions according to the animals they contain. The distribution of the main groups, and the animals characteristic of the various divisions. The factors encouraging and limiting dispersal; former land connections, continuous areas, barriers, human interference, etc. One hour per week.

29, 30. **Advanced Studies.** Students in the Fourth Year of the Science Course will be given opportunities for further reading and practical work including the carrying out of independent investigations. Hours by arrangement.

Research. Encouragement will be given to anyone wishing to conduct research and such equipment as is present in the laboratories and library will be available.

Text Books. Advice regarding special text books, reference books and books for supplemental reading will be given in the various senior classes.

Senior Matriculation for Medicine: Courses 7, 8.
First Year, Pharmacy: Courses 5. 6.
Second Year, Pharmacy (Degree Course): Courses 1, 2, 3, 4.
Second Year, Arts: Courses 1, 2; 3, 4.
Second Year, Science: Courses 1, 2; 3, 4.
Third Year, Arts: Courses 13, 14, 15, 16.
Third Year, Science: Courses 13, 14, 15, 16, 21, 22, 24.
Fourth Year, Arts: Courses 13, 14, 15, 16.
Fourth Year, Science: Courses 13, 14, 15, 16, 21, 22, 24.
First Year, Medicine: Courses 9, 10, 11, 12.

CURRICULA IN ENGINEERING

I. BACHELOR OF SCIENCE (in Civil Engineering)

MATRICULATION

The requirements for Matriculation are set forth on page 35.

Object of the Course

The course in Civil Engineering is designed to give a thorough training in the fundamental principles of such liberal and scientific subjects as constitute the foundation for all branches of Engineering, and to encourage the student so to understand each principle that he will be able to apply it intelligently to the solution of practical problems. Special training is also given in subjects especially related to the practice of Civil Engineering in all its branches, such as:

(1) Land and Geodetic Surveying*.
(2) Railway Engineering.
(3) Hydraulic Engineering.
(4) Municipal and Sanitary Engineering.
(5) Bridge and Structural Engineering.
(6) Highway Engineering.

The course also provides instruction in the principles of Mechanical Engineering and Electrical Engineering.

Summer School in Surveying

For students entering the Second Year.

Special attention is directed to the establishment of a Summer School in Surveying, which is conducted along the lines followed by leading Schools in Engineering in Canada and in the United States. The need of this Summer School has been felt for many years, as owing to climatic and other conditions, it has been found impossible to give adequate training in field surveying during the regular University Year.

The Summer School will open on Tuesday, September 6th, 1921, and will continue without interruption for four weeks. Surveys will be made in the vicinity of Winnipeg and the courses are arranged to utilize the whole day. For details of this course, see course 11, page 96.

Attendance at this Summer School is required of all students in Engineering, who purpose entering the Second Year.

Method of Instruction

Instruction is given by class room work which includes lectures and recitations, together with actual practice in the drafting room, in the field and in the laboratories.

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* The course has been specially arranged so that students who intend to take out licenses as Land Surveyors, may select subjects from the Civil Engineering Course, which bear directly upon the examination for Land Surveyors.

Examinations

In order to pass in any examination of the Civil Engineering Course (beyond Matriculation), candidates are required to make a standing of 50 per cent. on each subject. The practical work in the field, laboratory, drafting room and class-room during the session is counted.

Outline of Courses

FIRST YEAR

Reference Course No.	Page		Fall Term Lec.	Fall Term Pract.	Spring Term Lec.	Spring Term Pract.
5, 6, 7, 8	51	English	2	----	2	----
19, 20	73	Algebra	2	----	2	----
52	74	Solid Geometry and Mensuration	----	----	4	----
17	73	Analytical Geometry	3	----	----	----
93	75	Descriptive Astronomy	2	----	----	----
11, 12		Mechanics	2	----	2	----
13, 14, 21, 22	77-78	Physics	2	3	2	3
29, 30	84	Chemistry	----	3	----	3
3, 4	96	Descriptive Geometry	2	6	2	6
6	96	Surveying	----	----	2	----

SECOND YEAR

Reference Course No.	Page		Fall Term Lec.	Fall Term Pract.	Spring Term Lec.	Spring Term Pract.
21, 22	73	Calculus	4	----	2	----
31	73	Spherical Trigonometry	2	----	----	----
56	74	Analytical and Applied Mechanics	----	----	4	----
17, 18	97	Materials of Construction	1	----	1	----
15, 16, 23, 24	77-78	Physics	2	3	2	3
5	96	Perspective Drawing	1	3	----	----
16	97	Cement Testing Laboratory	----	----	----	3
19, 20	97	Graphical Statics	1	3	1	3
19	101	Kinematics of Machines	1	3	----	----
20	101	Dynamics of Machines	----	----	1	3
7, 8	96	Surveying	2	----	2	----
9, 10	96	Mapping	----	3	----	3
11	96	Surveying Field Work	----	----	----	----

Note—Surveying Field Work, 4 weeks beginning September 6th, 1921.

THIRD YEAR

Reference Course No.	Page		Fall Term Lec.	Fall Term Pract.	Spring Term Lec.	Spring Term Pract.
96	75	Astronomy	----	----	2	----
25	98	Foundations	2	3	----	----
5, 6, 7, 8	81	Geology	2	2	2	2
29, 30	98	Hydraulics	2	----	2	----
32	98	Hydraulic Laboratory	----	----	----	3
28	102	Mechanical Engineering Lab	----	----	----	3
13, 14	97	Railway Engineering	2	3	2	3
21, 22	97	Strength of Materials	3	3	3	3
23	98	Strength of Materials Lab	----	3	----	----
27, 28	98	Structural Design	1	3	1	3
54	74	Theory of Errors	----	----	1	----
21, 22	101	Thermodynamics	2	----	2	----

FOURTH YEAR

Reference Course No.	Page		Fall Term Lec.	Fall Term Pract.	Spring Term Lec.	Spring Term Pract.
35, 36	99	Bridge Design	2	6	2	6
15, 16	101	Elements of Electrical Engineering	2	3	2	3
12	97	Geodesy	----	----	2	----
39	99	Highway Engineering	2	3	----	----
15	97	Railway Economics	2	----	----	----
38	99	Reinforced Concrete Design	----	----	2	3
33, 34	98-99	Sanitary Engineering	2	3	2	3
37	99	Theory of Structures	2	3	----	----
31	98	Water Power Development	2	----	----	----
29	102	Engineering Economics	----	----	2	----
41, 42	99	Inspection and Reports. Graduation Thesis.				

Summer Theses

Students of the First, Second and Third Years are required to prepare during the Summer following each of these years a thesis describing in detail some piece of engineering work or structure, or describing any work with which they have been connected during the vacation.

Theses must be typewritten on letter size paper bound in stiff covers and submitted to the Secretary of the Engineering Committee on or before November 30th.

Graduation Theses

Every student of the Fourth Year is required to prepare a design, with adequate drawings, of some engineering work or enterprise, or to complete an original research on some material of construction.

The thesis shall be handed in before the close of the session.

II. MASTER OF CIVIL ENGINEERING

Candidates for the degree of Master of Civil Engineering (M.C.E.) must have been admitted to the degree of Bachelor of Civil Engineering or of Bachelor of Science (in Civil Engineering) at least two years previously, must have spent the interval in the active practice of the profession, and must present theses (with plans), satisfactory to the examiners, upon some engineering work with which they have been connected.

III. BACHELOR OF SCIENCE (in Electrical Engineering)

MATRICULATION

The requirements for matriculation for Engineering are set forth on page 35.

UNDERGRADUATE COURSE IN ELECTRICAL ENGINEERING

General Plan of Course

After having matriculated, the student of Electrical Engineering is required to obtain credit for attendance at lectures and for field, office and laboratory work, as outlined below, and to pass four examinations. before being admitted to the degree of Bachelor of Science (in Electrical Engineering), viz., the First, the Second, the Third and the Fourth Year examinations.

Object of the Course

The course in Electrical Engineering is intended to give a student, first, a preliminary training in the various sciences, such as Physics, Chemistry and Mathematics, which must form the basis of any engineering education; secondly, instruction in the general engineering subjects, such as Surveying, Mechanical Drawing, Strength of Materials, and Hydraulics; and thirdly, an intimate knowledge of the subjects required to qualify a man for the special work of an Electrical Engineer, namely, the flow of continuous and alternating currents, the design and operation of continuous and alternating current machinery, electric railways, electric lighting and power distribution, mechanical engineering, hydraulic machinery and machine design.

In general, the course is intended to give a student a working knowledge of the principles of Civil and Mechanical Engineering, and a more specialized training in Electrical Engineering, which, when combined with experience in practical work, will qualify him to perform the duties of an engineer in charge of the design, operation or management of electrical plants, railways or other industries.

Method of Instruction

Instruction is given by lectures, recitations and class-room work, and by actual practice in field, drafting room and laboratory.

Examinations

In order to pass in any examination of the Electrical Engineering Course (beyond Matriculation), candidates are required to make a standing of 50 per cent. on each subject. The practical work in the field, drafting-room, class-room and laboratories during the session is counted.

OUTLINE OF COURSE

First and Second Years

The First and Second Year courses are the same as those required of students of the First and Second Years in Civil Engineering.

Third Year

Course No.	Page	SUBJECT	Fall Term		Spring Term	
			Lec.	Pract.	Lec.	Pract.
1, 2	100	Continuous Currents and C.C. Machinery	2	..	2	..
11, 12	101	Continuous Current Laboratory	..	6	..	6
23, 24	102	Machine Design	1	3	2	3
21, 22	101	Thermodynamics and Power Plants	2	..	2	..
25, 26	78	Electrical Measurements	..	3	..	3
21, 22	97	Strength of Materials	3	3	3	3
29, 30; 32	98	Hydraulics	2	..	2	3
23	98	Strength of Materials (Lab.)	..	3	..	..
28	102	Mechanical Engineering (Lab.)	..	..	..	3
23	73	Engineering Mathematics	2	..	..	..

A series of visits to electrical power plants and industries where electricity is used, will be made under the guidance of the professor of Electrical Engineering, in order that the student may become familiar with the methods of using electricity in actual commercial practice.

In the summer vacation each student will be required to prepare a complete set of drawings of some electrical power plant, or to write a thesis on an electrical or other engineering subject.

Students are strongly recommended to spend their holidays at electrical or mechanical engineering work of some kind, and the value of such work will be recognized in the final estimate of the student's qualifications for the degree.

Fourth Year

Course No.	Page	SUBJECT	Fall Term Lec.	Fall Term Pract.	Spring Term Lec.	Spring Term Pract.
3, 4	100	Alternating Currents and A.C. Machinery	3	–	3	–
13, 14	101	Alternating Current Laboratory		9	–	9
5, 6	100	Electrical Machine Design	1	3	1	3
7	100	Electric Lighting and Power Distribution	3	–	–	–
8	100	Electric Traction	–	–	3	–
10	101	High Tension Transmission	–	–	1	–
25, 26	102	Power Plant Design	2	3	2	3
9, 10	83	Electro-Chemistry	1	–	1	–
29	98	Water Power Development	2	–	–	–
17, 18	101	Radio and Wire Signalling. (optional)	1	3	1	3
29	102	Engineering Economics	–	–	2	–
		Visits to Power Plants.				
		Thesis				

During the latter part of the second term the time allowed for laboratory work will be devoted to some original investigation, the results of which will be presented as a thesis at the end of the session.

IV. MASTER OF ELECTRICAL ENGINEERING

Candidates for the degree of Master of Electrical Engineering (M.E.E.) must have been admitted to the degree of Bachelor of Electrical Engineering or of Bachelor of Science (in Electrical Engineering) at least two years previously, must have spent the interval in the active practice of the profession, and must present theses (with plans), satisfactory to the examiners, upon some engineering work with which they have been connected.

Courses in Engineering in Detail

DEPARTMENT OF CIVIL ENGINEERING

John N. Finlayson, M.Sc., M.E.I.C	*Professor*
Leslie I. Johnstone, B.Sc., A.M. Amer. Soc. C.E	*Assistant Professor*
R. W. Moffatt, B.A.Sc., A.M.E.I.C	*Assistant Professor*
C. F. Cameron, B.A., B.C.E., A.M.E.I.C	*Lecturer*
Douglas L. McLean, B.Sc., A.M.E.I.C	*Lecturer*
V. H. Evans, B.Sc. (C.E.)	*Demonstrator*
J. M. Fleming, B.Sc. (C.E.)	*Demonstrator*
J. H. Alexander, B.A	*Demonstrator*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Mechanical Drawing.** Use of instruments; geometrical problems; elementary principles of orthographic, oblique and axonometic projections; the application of such principles to the solution of problems relating to straight lines and planes; intersections and developments; plans, elevations and sections of solids; simple structural details and machine parts; bolts, screws, keys and rivets; sketches and working drawings of machine pieces; isometric drawing; lettering, shade lines and line shading. Lectures, one hour per week, practical work 6 hours per week, both terms. Text book: "Engineering Drawing," by T. E. French. *Assistant Professor Moffatt.*

3, 4. **Descriptive Geometry.** Problems in orthographic projections; problems relating to straight lines and planes; determination of shades, and shadows; generation and classification of lines and surfaces, tangencies; intersections and developments of curved surfaces; transition pieces. Lectures, two hours and drafting room six hours per week, both terms. Text book: Smith's Practical Descriptive Geometry. *Assistant Professor Moffatt.*

5. **Perspective Drawing and Map Projections.** Definitions and principles of parallel and angular perspective; construction of perspectives from working drawings; spherical projections and the construction of maps. Lectures, one hour and practical work three hours per week, first term. Text book, Smith's Practical Descriptive Geometry. *Assistant Professor Moffatt.*

6. **Surveying.** Theory, use and adjustment of surveying instruments; surveying methods; traverse lines and problems; stadia method. Two hours per week, second term. Text book, Breed and Hosmer, Elementary Surveying, Vol. I. *Assistant Professor Johnstone.*

7, 8. **Surveying.** Observations for meridian and latitude; cross-sectioning; establishing grades, city surveying, topographical surveying, computations of areas and volumes, land survey problems, plane table, sextant, Dominion Land Survey. Two hours per week, both terms. Text book, Breed and Hosmer, Vols. I and II and Instructions for D.L.S. *Assistant Professor Johnstone.*

9, 10. **Mapping.** Plotting from notes taken at summer survey camp. Three hours per week both terms. *Assistant Professor Johnstone and Demonstrator.*

11. **Surveying Field Work.** Measurement of lines and angles; differential and profile levelling; transit work; adjustments of instruments; a railroad survey; hydrographic survey of a river channel, includ-

ing measurement of discharge; a studia survey. *Assistant Professor Johnstone and Assistant Staff.*

12. **Geodesy.** Purposes of a geodetic survey, principles of triangulation, base-line measurement, measurement of angles, triangle adjustments and computations, computations of geodetic positions, geodetic levelling, astronomical determinations, map projections, adjustment of observations by method of least squares. Lectures, two hours per week, second term. *Assistant Professor Johnstone.*

13, 14. **Railway Engineering.** Preliminary and location surveys for railroads; geometry of simple and compound curves; turnouts; Y tracks and crossings; the railroad spiral, earthwork, the mass diagram, practice in running curves and setting slope stakes; measurement and computation of quantities, construction of maps and profiles. Lectures, two hours; field and office, three hours per week, both terms. Text book, Allen's Curves and Earthwork, with tables. *Assistant Professor Johnstone.*

15. **Railway Economics.** Organization and financing of railway companies; effect of grade, curvature and distance on the operating expenses; relation of operating expenses to gross revenue and fixed charges; relation of probable traffic to population; costs of betterment of existing lines in relation to saving in operating expenses and increase in gross revenue. Lectures, two hours per week, first term. *Assistant Professor Johnstone.*

16. **Cement Testing Laboratory.** Standard tests of different brands of cement; determining fineness; specific gravity; tensile strength, normal consistency; time of setting, and soundness; tests of transverse, compressive and torsional strength; determination of the effect of heat, salt, alkalies, and freezing upon cement. Laboratory work, three hours per week, second term. *Assistant Professor Moffatt.*

17, 18. **Materials of Construction.** Manufacture and properties of the various materials used by the engineer, such as wood, stone, brick, cement, concrete, cast iron, wrought iron, steel; alloys; discussion of standard specifications; methods of testing materials; consideration of unit stresses of each material; theoretical discussion of strength of beams. Lectures, one hour per week, both terms. Text book: Mill's "The Materials of Construction"; Reference book: Moore's "Materials of Engineering." *Assistant Professor Moffatt.*

19, 20. **Graphical Statics.** Composition and resolution of forces; the use of force and funicular polygons in the determination of resultants, reactions, centres of gravity, moments of inertia and stresses in simple trusses due to static and wind loads; graphical determination of shear, bending moment and deflections in beams; analytical checks for stress, shear, bending moment and deflection diagrams; simple influence diagrams. Lectures, one hour and drafting room three hours per week, both terms. Text Book: Malcolm's "Graphic Statics." *Mr. Cameron.*

21, 22. **Strength of Materials.** A study of the application of mechanical principles to problems of stress and strain in Engineering materials and of the fundamental principles and accepted theories used in the design of beams, columns, shafting, spiral springs, retaining walls and dams. Elementary consideration of compound stresses. This course is illustrated by numerous problems involving calculation of shears, bending moments, deflections and stress intensities in simple, fixed and continuous beams, columns, etc.; design of simple reinforced concrete beams. Lectures, three hours and computations and design, three hours per week, both terms. Text book: Morley's Strength of Materials (Longmans). *Professor Finlayson and Mr. Cameron.*

23. **Strength of Materials—Laboratory.** Material testing; tensile tests of iron and steel bars, wire and cable; compression tests of iron and steel, timber, brick, stone, concrete, and tile; shearing tests of wood and steel; transverse tests of timber, iron, steel and concrete beams; torsional tests of rods and springs; load strain diagrams; calculation of stresses, elongation, deflection, ductility, etc.; moduli of elasticity, rupture, resistance, and rigidity; tests of road materials. Laboratory work, three hours per week, first term. *Assistant Professor Moffatt and Assistant Staff.*

25. **Foundations.** Explorations for foundations; bearing power of soils and methods of improving the bearing power; timber and reinforced concrete piles; pile driving; deep foundations and foundations under water; theory of earth pressure; typical foundation designs. Lectures, two hours and drafting room, three hours per week, first term. Text books: "Foundations of Bridges and Buildings" by Jacoby and Davis, and "Retaining Walls for Earth" by Howe. *Mr. Cameron.*

27, 28. **Structural Design.** Problems in the design of timber trestles, roof trusses, box girders, columns, and plate girders. Lectures, one hour and drafting room, three hours per week, both terms. Text books: "Steel Mill Buildings" by Ketchum and "Cambria Steel." *Mr. Cameron.*

29, 30. **Hydraulics.** Pressure of water on plane and curved surfaces; centre of pressure; Bernouilli's Theorem; investigation of flow through orifices, mouthpieces, weirs, pipes and channels; velocity and discharge measuring devices; dynamic action of jets and streams; water wheels and turbines. Lectures, two hours per week, both terms. Text book: "Text Book on Hydraulics," Russell. *Assistant Professor Johnstone.*

31. **Water Power Development.** Reconnaissance of water power; study of structures and equipment; precipitation; run off; hydrographs; storage; theory of modern types of turbines, practical application of prime movers and governing; flooded areas, dams, intakes, pipe lines, flumes, buildings, ice troubles, general features; study of existing installations; economics, specifications, government regulations. Lectures, two hours per week, first term. References: Mead, "Water Power Engineering;" Koester, "Hydro-Electric Developments and Engineering;" Lyndon "Development and Distribution of Water Power;" Wegmann, "Design and Construction of Dams." *Assistant Professor Hall.*

32. **Hydraulic Laboratory.** Discharge measurements and determination of co-efficients for orifices, mouthpieces, weirs and pipes; tests on water meters, Venturi meters, pitometers; efficiency tests of pumps, water wheels and turbines. Laboratory, three hours per week, second term. *Assistant Professor Johnstone and Assistant Staff.*

33. **Sanitary Engineering: Sewerage Systems and Sewage Disposal.** Includes under Sewerage Systems: amount of house sewage, amount of storm sewage, flow in sewers, flushing and ventilating; sewer appurtenances; collection of data for design of a sewerage system; design of separate and combined systems; detail plans, specifications and contracts; supervision of construction; construction details; maintenance. Under Sewage Disposal: disposal by dilution, removal of suspended matter; oxidation method; other treatment methods. Lectures, two hours and design period three hours per week, first term. Text book: "Sewerage" by A. Prescott Folwell, or "American Sewerage Practice," Volumes I, II and III Metcalf and Eddy. *Mr. McLean.*

34. **Sanitary Engineering: Water Supply.** Quantity of water required; sources of supply; precipitation; evaporation and percolation; stream-flow

including minimum flow and flood flows; ground-water; examination of water-supplies; quality of water; construction of water-works considered on general economic grounds; hydraulics relating to works and structures in water supply systems; river and lake intakes; works for collection of water; works for purification of water; works for the distribution of water; the distributing system, operation and maintenance. Lectures, two hours and design period three hours per week, second term. Text book: "Public Water Supplies" Turneaure and Russell, or "Waterworks Handbook"—Flinn, Weston and Bogert. *Mr. McLean.*

35, 36. **Bridge Design.** Instruction is given on the preparation of complete working drawings for typical structures including a plate girder bridge and a riveted or pin connected truss; calculation of stresses in the bridge members due to both concentrated and uniformly distributed loads; economic and other considerations governing choice of bridge for particular crossings; study and discussion of standard specifications. Lectures, two hours and drafting room six hours per week, both terms. Text book: Kirkham's "Structural Engineering." *Professor Finlayson.*

37. **Theory of Structures.** The object of this course is to study the application of the principles established in Course 21, 22 to the design of statically determinate framed structures, under various conditions of loading. It also treats of the analytical and graphical computation of stresses and strains in such structures as continuous girders, movable spans, suspension bridges, steel arches of different types; trusses with redundant members, etc. Lectures, two hours and drafting room three hours per week, first term. Text book: Johnson, Bryan and Turneaure's "Modern Framed Structures." *Professor Finlayson and Mr. Cameron.*

38. **Reinforced Concrete Design.** This course includes complete designs of reinforced concrete slabs, beams, girders, columns, footings, arches, cantilever and counterfort types of retaining walls; specifications and costs. Lectures, two hours and drafting room three hours per week, second term. Text book: Hool's "Reinforced Concrete Construction," Vols. I, II and III. *Professor Finlayson and Mr. Cameron.*

39. **Highway Engineering.** Location, drainage and surfacing materials for roads; construction of earth, gravel, waterbound and bituminous macadam roads; bituminous materials; dust preventives and bituminous surfaces. Lectures, two hours per week, first term. Laboratory work: see Strength of Materials Laboratory. Text book: "Elements of Highway Engineering" by Arthur H. Blanchard. *Assistant Professor Moffatt.*

41, 42. **Inspection and Reports.** Arrangements will be made to visit manufacturing plants, municipal works and interesting buildings and bridges in the vicinity of Winnipeg.

Senior Matriculation: Courses 1, 2.
First Year Engineering: Courses 3, 4, 6.
Second Year Engineering: Courses 5, 7, 8, 9, 10, 11, 16, 17, 18, 19, 20.
Third Year Civil Engineering: Courses 13, 14, 21, 22, 23, 25, 27, 28, 29, 30, 32.
Fourth Year Civil Engineering: Courses 12, 15, 31, 33, 34, 35, 36, 37, 38, 39, 41, 42.
Third Year, Electrical Engineering: Courses 21, 22, 23, 29, 30, 32.
Fourth Year Electrical Engineering: Course 31.
Second Year, Architecture: Courses 3, 4, 17, 18.
Third Year, Architecture: Courses 19, 20, 21, 22.
Fourth Year, Architecture: Courses 25, 27, 28, 38.

DEPARTMENT OF ELECTRICAL ENGINEERING

Edward P. Fetherstonhaugh, M.C., B.Sc., M.E.I.C., Assoc. A.I.E.E. .... *Professor*
John W. Dorsey, E.E., A.M.E.I.C., Assoc. A.I.E.E. .... *Assistant Professor*
Norman M. Hall., O.B.E., B.Sc., A.M.E.I.C. .... *Asst. Prof. in Mechanical Engineering*
W. E. Lovell, B.Sc. (E.E.) .... *Demonstrator*

For key to system of numbering courses, see page 4.

1, 2. **Continuous Currents and Continuous Current Machinery.** A course of lectures on the flow of continuous currents in circuits of various kinds, the laws of magnetism, the electrical and magnetic properties of materials, and the construction, theory and characteristics of continuous current machinery. In the latter part of this course a few lectures are devoted to the elementary principles of alternating current circuits and machines. Textbooks: Christie's Electrical Engineering, and The Standard Handbook for Electrical Engineers. Two lectures per week. *Assistant Professor Dorsey.*

3, 4. **Alternating Currents and Alternating Current Machinery.** A course of lectures involving a study of the laws governing the flow of alternating currents in circuits containing resistance, reactance and capacity, separately and combined, and a study of the operating characteristics of alternating current generators, motors, transformers, meters, regulating devices, etc. Textbook: Christie's Electrical Engineering. Three lectures per week. *Professor Fetherstonhaugh.*

5, 6. **Electrical Machine Design.** Details and assembly drawings of, and full calculations involved in the design of direct and alternating current apparatus, such as motors, transformers, generators, etc. One lecture and three hours per week in draughting-room. Textbook: Gray, Electrical Machine Design. *Assistant Professor Dorsey.*

7. **Electric Lighting and Power Distribution.** In this course of lectures the general headings are generation, distribution and utilization. The economic and engineering problems of the power plant are first taken up, then the questions relating to the distribution system, and finally the various consuming devices are discussed. Such sub-headings as the following are included:—Prime movers, generators, switchboards, location and design of power stations and sub-stations, power plant economics, voltage regulation, problems in overhead and underground construction, transformers and their connections, protective devices, interior and exterior illumination, photometry, characteristics of incandescent and arc lamps, economical section of feeders, and rates for electrical energy. In connection with this course, each student is required to prepare complete plans, specifications and an estimate of capital cost and operating expenses for a municipal or industrial plant. Textbooks: Electrical Central Station Distribution Systems, by Gear and Williams; Light, Photometry and Illumination, by Barrows; and The Standard Handbook for Electrical Engineers. Three lectures per week, first term. *Professor Fetherstonhaugh.*

8. **Electric Traction.** This course deals with the engineering questions and calculations involved in the design, construction and operation of electric railways. It includes engineering preliminaries; types of motors, and their characteristics; speed and power curves, methods of control; the design of the generating plant, and overhead and track construction. Three lectures per week, second term. Textbook: Sheldon and Hausmann, Electric Traction and Transmission. *Professor Fetherstonhaugh.*

10. **High Tension Transmission.** Mathematical investigations of the problems involved in the design and operation of high tension lines, the selection of voltage and frequency, calculations of regulation under different conditions of load, lightning protection, "corona loss", etc. One lecture per week, second term. No textbook. *Professor Fetherstonhaugh.*

11, 12. **Continuous Current Laboratory.** To supplement the lecture course on Continuous Currents and Continuous Current Machinery, there will be a course of practical work in the laboratory, in which students will be trained in the use of electrical machines of different types, and the various methods of testing electrical machinery to determine the uses to which they may be put and their limitations. Two laboratory periods per week of three hours each. Textbook: C. Smith, Testing Dynamos and Motors. *Assistant Professor Dorsey.*

13, 14. **Alternating Current Laboratory.** A course of experimental work with alternating current motors, single phase and polyphase, generators, transformers, meters of various types, the oscillograph, and other alternating current apparatus. The student in this course will be instructed to investigate the characteristics of circuits, instruments and machines, and will be trained to use his own initiative as far as is possible in determining the methods to be pursued. Three laboratory periods per week of three hours each. Textbook: C. Smith, Alternating Current Testing. *Professor Fetherstonhaugh.*

15, 16. **Elements of Electrical Engineering.** A general treatment of the elementary principles involved in problems relating to the generation, transmission and utilization of electrical power and an accompanying course of laboratory instruction, consisting of tests and experiments with continuous and alternating current machinery, designed to verify the laws of electricity and magnetism and to familiarize the student to some extent with the characteristics and limitations of the various types of machines to be met with in practice. Lectures, two hours per week. Textbook: Gray's Principles and Practice of Electrical Engineering. Laboratory, one period of three hours per week. Textbook: C. Smith, Testing Dynamos and Motors. *Assistant Professor Dorsey.*

17, 18. **Radio and Wire Signalling.** A course covering the various systems of communicating by electricity. The Morse Telegraph, the Telephone Radio Telegraphy, Radio Telephony, measurements of high frequency quantities. Textbook: Radio Engineering Principles, Brown and Lawer. First term, one lecture per week; second term, one lecture and one laboratory period per week. (Optional). *Assistant Professor Dorsey.*

19. **Kinematics of Machinery.** Elements of mechanism, relative motion, virtual centres, velocity and acceleration of machine parts, classification of simple mechanisms, design of wheel teeth, belt gearing and cams. One lecture and three hours drawing per week. Textbook: Theory of Machines (Angus). *Assistant Professor Hall.*

20. **Dynamics of Machinery.** Application of principles of mechanism to the determination of forces acting in machine links; frictional resistances and efficiency of machines including sliding, journal, rolling, gear and belt friction. One lecture and three hours drawing per week. Textbook: Theory of Machines (Angus). *Assistant Professor Hall.*

21, 22. **Thermodynamics and Power Plants.** A course, of lectures on power plants covering thermodynamics, properties of gases and of steam, performance, testing and mechanics of the steam engine valve gears, fuels and combustion, steam boilers, steam turbines, condensers, feed water heaters and auxiliaries, gas engines, gas producers and general considerations involved in the design and economical operation of power plants and the selection of equipment. Two lectures per week. Text book: Heat Engines (Allen and Bursley). *Assistant Professor Hall.*

23, 24. **Machine Design.** Application of the theory obtained in other courses to designing of machine parts. Starts with designing and drawing of simple machine parts and gradually leads up to the designing and complete working drawings of an entire machine. First term, one lecture and three hours drawing per week; second term, two lectures and three hours drawing per week. *Assistant Professor Hall.*

25, 26. **Power Plant Design.** The purpose of this course is to give the fundamentals of good power plant design in general and in detail. During the second term a complete power plant will be designed and general drawings made. Two lectures and three hours drawing per week. *Assistant Professor Hall.*

28. **Mechanical Engineering Laboratory.** Testing of various types of heat engines and writing reports for same. Second term, three hours laboratory per week. *Assistant Professor Hall.*

29. **Engineering Economics.** A course designed to give the engineering student an insight into the commercial and financial aspect of his profession. It involves a study of property and its transfer, money and credit, stocks and bonds, partnership and corporations, the banking system, operating costs and fixed charges, depreciation and obsolescence, valuations, specifications and contracts. Two hours per week, second term. *Assistant Professor Hall.*

30. **Heating and Ventilation.** An elementary course covering physics of heating and ventilation, heat losses from buildings, hot water and steam systems, direct and indirect heating and air washing, piping systems, suitability of various complete systems for typical buildings. Text book: "Heating and Ventilation Plants" Part II, C. L. Hubbard. One hour per week, first term. *Assistant Professor Hall.*

31. **Electrical Engineering and Illumination.** A brief course of lectures and laboratory work for Architectural students, designed to give an insight into the use of electricity for lighting of buildings and the science and art of illumination. One lecture and three hours laboratory per week, second term. Text book: Gray's "Principles and Practice of Electrical Engineering."

Second Year, Civil and Electrical: Courses 19, 20.
Third Year, Civil: Courses 21, 22, 28, 29.
Third Year, Electrical: Courses 1, 2, 11, 12, 21, 22, 23, 24, 28, 29.
Third Year, Architecture: Course 31.
Fourth Year, Electrical: Courses 3, 4, 5, 6, 7, 8, 10, 13, 14, 25, 26, 29.
Fourth Year, Civil: Courses 15, 16, 29.
Fourth Year, Architecture: Course 30.

CURRICULUM IN ARCHITECTURE

The University of Manitoba confers one degree in Architecture viz: Bachelor of Architecture (B. Arch.) The following are the requisites for proceeding to the same.

BACHELOR OF ARCHITECTURE

The University offers a full professional course of instruction, leading to the degree of Bachelor of Architecture, and covering a period of four years. It aims to provide its graduates in Architecture with the general training necessary for the demands of the best professional practice. To that end the scheme of study combines complete technical instruction with the essentials of a liberal education.

Architecture is essentially a fine art. While it rests on statics and the properties of materials, as a physical basis, it differs from engineering in the degree in which construction is invested with the spiritual quality of beauty. Its successful practice demands the possession of a broad general culture, a liberal training in architectural precedent and forms and in original design, and a thorough knowledge of the principles underlying sound construction. More important than the imparting of any specific knowledge, however, is the necessity of training the mind to reason and to think logically and clearly; of stimulating the imagination; of educating the aesthetic sense; and of imparting facility in the expression of ideas through the usual mediums.

The architect being first of all a designer, the study of design is made central, an increasing proportion of time from year to year being devoted to it and to its preparatory and accessory subjects, the comprehensive courses in history of architecture and ornament opening the door to the world's wealth of architectural traditions and forms, thus seen in their development and true relation to the times and peoples, and supplying the varied elements of design, to be fused and recombined by the trained imagination and cast in new forms of beauty for the solution of new problems.

Draftsmanship, as the medium of expression and an important means of evocation of ideas, receives constant attention throughout the course, in the form of drawing as such, and as employed in design and other graphical work.

A knowledge of scientific construction is an essential part of the architect's equipment. Courses in mathematics, applied mechanics, the properties of building materials, lead to the study of the theory and practice of structural design, and train the student to control intelligently the structural problems of modern architecture.

Provincial License to Practise

Graduates are exempt from the examinations of the Manitoba Association of Architects and are eligible for the license to practise in this Province after completing two years service in an architect's office, following graduation, the Council of the Association being satisfied of the adequacy of such practical experience.

OUTLINE OF COURSE

Entrance Requirements

The requirements for Matriculation for Architecture are the same as those for Arts and Science, for which see pages 23 to 32.

First Year

Course No.	Page	SUBJECT	Lecture Hours per Week		Lab. Hours per Week	
			1st Term	2nd Term	1st Term	2nd Term
	105	Free-hand Drawing			2	2
1, 2	105	Elements of Architecture	1	1	2	2
5, 6	105	Shades and Shadows	1	1	3	3
1	72	Algebra	4			
5, 6	72	Plane Trigonometry	2	2		
4	72	Analytical Geometry		4		
1, 2, 3, 4	77	Elementary Physics	3	3	2	2
1, 2	83	General Inorganic Chemistry	3	3		
1, 2	51	English Composition	2	2		
5, 6	56	*French Reading and Literature	3	3		

*German or Italian for French-speaking students.

Second Year

Course No.	Page	SUBJECT	Lecture Hours 1st Term	Lecture Hours 2nd Term	Lab. Hours 1st Term	Lab. Hours 2nd Term
	105	Freehand Drawing			3	3
11	105	Elements of Architecture	1		3	
15, 16	105	†History of Architecture, Anc. and Med.	2	2		
19, 20	105	Architectural Design			5	5
17, 18	97	Materials of Construction	1	1		
11, 12; 13, 14	77	Physics—Mechanics; Heat; Sound	4	4		
21, 22	105	Perspective	1	1	2	2
52	74	Solid Geometry and Mensuration		4		
3, 4	96	Descriptive Geometry	2	2	6	6
17	73	Analytical Geometry	3			
7, 8	51	English Literature	1	1		

Third Year

Course No.	Page	SUBJECT	Lecture Hours 1st Term	Lecture Hours 2nd Term	Lab. Hours 1st Term	Lab. Hours 2nd Term
	105	Freehand Drawing			3	3
15, 16	105	†History of Architecture, Anc. and Med.	2	2		
33, 34	105	Theory of Architecture	2	2		
35, 36	106	History of Ornament; Decoration	2	2	3	3
39, 40	105	Architectural Design			12	12
19, 20	97	Graphic Statics	1	3	1	3
21, 22	97	Properties and Strength of Materials	3	3	3	3
		Plumbing and Sanitation	1			
31	102	Electrical Engineering and Illumination		1		3

Fourth Year

Course No.	Page	SUBJECT	Lecture Hours 1st Term	Lecture Hours 2nd Term	Lab. Hours 1st Term	Lab. Hours 2nd Term
	105	Freehand Drawing			3	3
59, 60	105	Architectural Design, Thesis			12	12
25	98	Foundations	2		3	
30	102	Heating and Ventilation				
27, 28	98	Structural Design	2	2	3	3
38	99	Reinforced Concrete Design		2		3
61, 62	106	Professional Practice	1			

† 15, 16, Ancient and Mediaeval History, alternates with 17, 18, Renaissance and Modern, the Second and Third Year classes being combined for the purpose. 15, 16, will be given in 1921-22.

DEPARTMENT OF ARCHITECTURE

Arthur Alexander Stoughton, Ph.B. (Col.), M.R.A.I.C., M.Soc. Beaux Arts Archts..*Professor of Architecture*

N.B.—For key to system of numbering courses, see page 4.

Drawing. Familiarity with drawing, necessary to the adequate expression of ideas and the proper presentation of architectural compositions, is secured by constant drill in free-hand and instrumental work, in the various media (pencil, pen, brush work, charcoal), in special exercises and incidental to all the subjects involving practical architectural work. Free-hand drawing in one or another form or medium is carried throughout the course.

1, 2. **Elements of Architecture, I.** The classic orders; their forms, details, development and history. Ware's Vignola, Part I. Lecture, one hour; drawing work, two hours a week.

11. **Elements of Architecture, II.** Fundamental features of structures; walls, openings, supports, columns, lintels, arches, vaults, ceilings, roofs, domes, stairs, and their artistic treatment, in the common forms in use in architectural composition. Ware's Vignola, Part II. Drawing work, three hours a week.

5, 6. **Shades and Shadows, I.** Method of accurate determination of the shades and shadows of all the common forms occurring in Architecture, with the general principles involved. McGoodwin's Shades and Shadows. Lecture, one hour; drawing work, three hours a week.

21, 22. **Perspective, II.** The principles of angular and parallel perspective, with practical application to various architectural problems. Lecture, one hour; drawing work, two hours a week.

15, 16; 17, 18. **History of Architecture, II, III.** Architectural forms and their development in relation to the civilization of different peoples and times, and to structural considerations; architectural treatment of structure in all times. This course is designed to lay a broad foundation of information and precedent, on which to base the work in design, to stimulate the mind, foster research, and cultivate taste and the critical faculty. Two parts, (1) Ancient and Medieval, (2) Renaissance and Modern. Courses 15, 16, Ancient and Medieval, will be given in 1921-22. Lectures, research work, designs in given styles. Lecture, two hours a week. Hamlin, History of Architecture; Fletcher, History of Architecture.

19, 20; 39, 40; 59, 60. **Architectural Design, II, III, IV.** As soon as the student has become familiar with the simple architectural forms and features and the methods of their representation, he is set to combining these elements in compositions increasing in size and complexity;—plans, elevations and interior design and decoration; culminating in the complete working out of a large composition, as a thesis. The practical study of design is effected by the development of problems from given programmes, with criticism and suggestion during the process, recourse being had to plates, photographs and other documents for aid and inspiration. One day problems are worked out on certain Saturdays. Second Year, five hours; Third and Fourth Years, twelve hours a week.

33, 34. **Theory of Architecture, III.** Discussion of various considerations involving the philosophy of art and architecture and the principles governing design; the place of architecture among the fine arts and its relation to building and construction; theories of proportion and principles of planning and composition; the influence of materials on design; conventionalization; the historic styles; scale, style, expression. character. Lecture, two hours a week.

35, 36. **History of Ornament and Decoration.** A course on the elements of ornament and decorative form and their development in all the ages, as applied to architecture and interior decoration; the use of sculpture, painting, furniture; with the study of color and of the arts and crafts allied to architecture. Lectures, research, sketches, problems in design. Owen Jones, Grammar of Ornament; Speltz, Ornament.

Construction. Theoretical. The mathematical subjects of algebra, plane and solid geometry, trigonometry, analytical geometry, calculus, mechanics, and graphic statics, form the groundwork for and are followed by the technical courses in engineering calculations and structural design, on the one hand, and the graphical subjects of shades and shadows, perspective and stereotomy, on the other. Practical—The nature, properties and strength of the building materials. Details of construction in wood, iron and steel, and masonry; specifications; office practice; sanitation and plumbing; heating and ventilation; electrical engineering, etc.

61, 62. **Professional Practice.** The history of the profession. Education, training, status and function of the architect in different periods. Professional ethics. Relation of the architect to client, builder, assistants and the public. Organization and conduct of his office. Procedure in carrying out work. Scope of architecture as a profession, business, art, construction, service. Architectural jurisprudence. This course is designed to present the several aspects and relations of the professional activity of the architect, thus anticipating the experience of practical life and preparing the student for it. Two hours a week.

Summer Work. The student must engage in certain work, prearranged with the head of the department, such as office practice in an office or on a building operation, sketching, reading, research or shop work, and make a definite and satisfactory presentation of the results not later than the opening week of the Fall term. The contact with actual office work or construction during the course is of vital moment in giving significance to precept and theory. The opportunity that the vacation offers for out-of-door sketching and leisure for reading and drawing is to be taken full advantage of.

CURRICULA IN MEDICINE

The University of Manitoba confers two degrees in Medicine, viz.: Doctor of Medicine (M.D.) and Master in Surgery (C.M.).

REQUIREMENTS FOR THE DEGREE OF M.D.

Students taking the course in medicine are required after passing the Junior (Arts) Matriculation Examination of this University to spend six full academic years in undergraduate study before receiving the degree of M.D. The first of these six years, consisting as it does of premedical subjects, corresponds, with certain restrictions as to options, to the first year of the Arts or Science curriculum. The work of this premedical University year is hence designated "Senior Matriculation." The requirements for Matriculation for Medicine are set forth in detail on pages 33-34. The ensuing five years of medical study proper, fall broadly into the following groups:

(1) The first two years comprise the so-called purely scientific subjects.

(2) The second two years comprise those subjects more directly concerned with the practice of medicine and surgery, the third year being so arranged as to form a link between the earlier "laboratory years," and the more practical fourth and fifth years.

(3) The fifth year work is almost entirely clinical. Students of this year will, during the greater part of the session, act as clinical clerks in the wards of one or other of the general hospitals under the supervision of members of the Faculty to whom each student will submit the case histories taken by him in the course of his duties. Ten such acceptable histories, five of which shall be of medical cases, must be submitted to the Head of the Department concerned. No duplicate histories will be allowed.

Proposed Enlargement of Entrance Requirements and Reorganization of Medical Curriculum

It is proposed that commencing with the session 1922-1923 entrance to the medical course shall be preceded by the satisfactory completion of *two* years of University work in the Faculty of Arts and Science subsequent to (Junior) Matriculation. This will permit of a reduction of the medical course proper to four years, but the degree of Doctor of Medicine will not be conferred until the candidate has, subsequent to the completion of his fourth undergraduate year, served acceptably for at least one year as an interne in a general hospital accredited for the purpose by the Medical Faculty Council of this University.

LENGTH OF SESSION

For the University Year 1921-22, the session will consist of thirty-two weeks, exclusive of holidays, comprising an Autumn term of fourteen and a Spring term of eighteen weeks. A lengthening of the session of the Medical Faculty to thirty-six weeks is proposed for the near future, due announcement of which will be made as soon as the necessary University legislation has been passed by the Board of Governors.

The third session of the Faculty of Medicine of the University of Manitoba (the thirty-ninth of the Medical School) will open on Wednesday, September 14th, 1921. The session will comprise two terms of fourteen and eighteen weeks respectively.

LABORATORIES

Adequate laboratory facilities are provided in the medical school for the work of the undergraduate curriculm and each department possesses accommodation and equipment for original research on the part both of the departmental staffs and of any graduate or undergraduate students who are considered qualified to undertake such work.

LIBRARIES AND MUSEUMS

The College contains a general medical library, which has been extended recently by the addition of the Library of the College of Physicians and Surgeons of Manitoba as well as by the private library of the late President Wesbrook of the University of British Columbia. Departmental libraries of considerable value also exist in the various departments. All of these are available to students.

The Department of Pathology possesses a valuable and rapidly growing museum, the specimens of which are well catalogued and annotated and available for study by all registered students.

The anatomical and embryological museums, are undergoing rapid development under the direction of Professor J. C. B. Grant.

CLINICAL FACILITIES

The wards of the Winnipeg General and St. Boniface Hospitals, which institutions together accommodate about one thousand patients, and are thoroughly equipped with all modern devices of value in the study and treatment of disease are available to students of this University.

The service of the Winnipeg General Hospital includes a well organized Obstetric Department, the attending staff of which are members of the Medical Faculty.

In the Winnipeg Children's Hospital and the City Municipal Hospitals for tuberculosis and for infectious diseases respectively, clinics in these departments of internal medicine proceed throughout the session, while arrangements have been made for intensive instruction to small groups at the Provincial Sanatoria of Manitoba and Saskatchewan. In the former, instruction is under the personal supervision of Dr. D. A. Stewart, the Medical Superintendent of the Sanatorium at Ninette. In the latter, instruction is in charge of Dr. R. G. Ferguson, Medical Superintendent of the Sanatorium at Ft. Qu'Appelle.

The Provincial Psychopathic Hospital is located in the grounds of the Winnipeg General Hospital, and is an institution well up-to-date in appointments for the treatment of the class of cases for which it is designed. Clinical instruction is available for students of the University and is under the supervision of Dr. A. T. Mathers.

DISPENSARY CLINICS

The outdoor dispensary of the Winnipeg General Hospital is largely attended by the ambulant sick of all ages and both sexes. In this dispensary, instruction is given in the various departments by members of the teaching staff, and the students are given every opportunity to study the diagnosis and treatment of disease in its earlier stages.

RESEARCH

Facilities are offered to advanced and graduate students who show an aptitude for the work for the prosecution of research in the departments of Anatomy, Physiology, Bio-chemistry, Pathology and Bacteriology.

UNDERGRADUATE COURSE

REGISTRATION, ETC.

1. Registration begins at 10 a.m., Tuesday, September 13th, 1921, and closes at 5 p.m., Tuesday, September 20th, 1921. The initial fee for registration in medicine is $5.00. Students are required to register in person and to be in actual attendance from the date of registration. (This rule will be rigidly enforced).

2. Each student on registering for the first time must provide himself with a microscope, meeting certain specifications to be laid down by the Medical Faculty Council. This microscope may be purchased from the University at cost or it may be obtained on a yearly rental of $25.00, which amount will be applied towards the purchase price of the microscope which will become the property of the student on payment of the balance of its cost at the end of his Fifth Year. Any student paying for his microscope on the instalment plan may be permitted to remove the same from the Medical College for his private use upon furnishing a bond with satisfactory guarantors for an amount to be fixed by the Medical Faculty Council, dependent upon the cost of the instrument*.

3. On registering in the Third Year, each student must provide himself with an accurate haemacytometer, which may be purchased from the University at cost.

4. The tuition fees for the first, second and fifth years are $150.00 annually, or if paid in two instalments, $160.00. The tuition fees for the Third and Fourth Years are $160.00. or if paid in two instalments, $170.00, this amount to cover hospital fees, which will be paid to the hospital by the University.

5. All students other than Senior Matriculants of the University of Manitoba, and all students claiming advanced standing, must submit their certificates on which they claim matriculation or advanced standing to the Registrar of the University not later than September 1st, 1921.

6. Regular attendance on all courses will be insisted upon, and such attendance, as well as a satisfactory record of work done during the term, as evidenced by the results of class examinations, quizzes, etc., will be required to qualify a student to sit for the annual or other grading examinations.

7. Students failing on papers of any year, the aggregate of whose maxima is more than 200, will be required to repeat the full work of that year in a succeeding annual session in connection with which regular attendance and satisfactory term work will be required as in the case of a year taken for the first time.

8. A student failing on a paper or papers of any year aggregating not more than 200, will be required to take a supplemental examination in September on the paper or papers on which he has failed, without the requirement of any additional attendance.

9. No student will be allowed to register for the full work of any year who has conditions of the previous year registered against him, the aggregate of whose maxima is more than 100.

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* The cost of the microscope is $140.00.

10. A student who at the close of the September supplemental examination is not able to qualify under Rule 8 for registration for the full work of the year next following, will be required to repeat the class work in the subject or subjects in which he has been conditioned before he again presents himself for examination, taking in addition at least two subjects to be prescribed by the Medical Faculty Council, either from the year in which his conditions are found or the succeeding year, satisfactory term work and attendance being required in all the subjects for which he registers.

11. No year may be repeated more than once by a student except by special permission of the Medical Faculty Council.

12. In no case may a condition be carried into a year later than the year next succeeding that in which the failure occurred.

REGULATIONS REGARDING EXAMINATIONS

Class examinations are held at intervals throughout each session and an examination at the end of each of the five years of the curriculum. Both class and annual examinations are considered in awarding standing. The work of the fifth year is chiefly valued according to the report of the teacher or teachers under whose supervision the student is placed, this report, being supplemented by a clinical examination at the end of the year.

Each candidate for the Fifth Year examination shall furnish documentary evidence of attendance for twenty-four months at some incorporated General Hospital, and also of eight months' practice in a Lying-in Hospital, or of having had equivalent obstetrical advantages, with a certificate of attendance upon at least ten cases of labor. He must furnish certificates of having attended six autopsies, with the notes thereon. He is also required to write histories of all cases allotted to him during the session. Ten such acceptable histories, five of which shall be of medical cases, must be submitted to the Head of the Department concerned. No duplicate histories will be allowed.

When a student is a graduate in Arts of any University recognized by the University of Manitoba, the privilege of taking the course in four years will be limited to those who have taken the Natural and Physical Science Course of the University of Manitoba, and in the Third and Fourth Years of that course have taken the subjects of Physics, Chemistry, Zoology, and Physiology, or equivalent standing in the University in which his Arts course was taken.

The tickets of such student in Medicine, Surgery, Obstetrics, Diseases of Children, Diseases of Women, Clinical Medicine, Clinical Surgery, Bacteriology, Ophthalmology and Otology, Operative Surgery and Orthopedic Surgery must all be for attendance subsequent to the end of his second full Winter Session at College. An Honor Graduate in Natural Science shall not be required to present tickets, nor pass an examination in any subject included in his Science Course, in which he has obtained at least second class honors.

A graduate in Arts may take the examinations for First, Second and Third Years in two examinations. At the end of his First Year he will be required to take the examination in First Year Anatomy and Second

Year Physiology, and at his second examination to complete the work of the first three years.

A student of Medicine from another University may be admitted *ad eundem statum* in the course in Medicine in the University of Manitoba. In the case of any student from another university applying for admission *ad eundem statum* in the University of Manitoba, it shall be at the option of the Medical Faculty Council to admit such student, even although his ticket may conflict with the foregoing regulations; but no student from another university can be admitted to the Fifth Year examination unless he has attended one full seven months' winter session, taking out all the Fifth Year tickets of the Medical Faculty of this University.

The full value of an examination in a *major subject shall be 100 marks. The full value of an examination in a †minor subject shall be 50 marks.

Fifty per cent. of the marks in each subject shall be required to satisfy the examiners.

The examinations shall be written, except in clinical and practical subjects.

In all subjects in which there is a theoretical and a practical course given, an examination will be held in both the theoretical and the practical, and the pass mark required in each.

Students of the Third Year who fail to secure satisfactory standing in class examinations in Medicine and Surgery (including practical work) of that year will be required to pass a practical examination in those subjects before registering in the Fourth Year.

To obtain Honors in each subject, or in all examinations of any year, a candidate must obtain 67 per cent. of the marks given in each subject, or of the total marks given for the examinations of the year including class examinations.

The Examiners in Medicine shall be nominated half by the Medical Faculty and half by the College of Physicians and Surgeons.

All degrees in Medicine shall be conferred by the Council of the University, on the recommendation of the Medical Faculty Council at a regular meeting of the University Council, or at a meeting specially called for that purpose.

The following are subjects of the respective Annual Examinations:

First Year Examination

Present 5 Year Course.	Proposed 5 Year Course beginning Session 1922-23.
1. Chemistry.	1. Anatomy, including Practical Anatomy.
2. Practical Chemistry.	2. Histology, " Practical Histology.
3. Zoology.	3. Physiology, " Practical Physiology.
4. Practical Zoology.	4. Biochemistry, " Practical Biochemistry.
5. Anatomy.	
6. Practical Anatomy (Upper Limb, Thorax, and Abdomen).	
7. Histology.	
8. Practical Histology.	

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*A Major Subject is one the courses in which cover fifty or more hours didactic instruction; or one hundred or more hours practical instruction.

†A Minor Subject is one, the courses in which cover less than fifty hours didactic instruction, or less than one hundred hours practical instruction.

Second Year Examination

Present Course	Proposed Course
1. Anatomy.	1. Anatomy, Theoretical and Practical.
2. Practical Anatomy (the whole body).	2. Embryology, “ “ “
3. Embryology.	3. Pathology, “ “ “
4. Bacteriology.	4. Bacteriology, “ “ “
5. Practical Bacteriology.	5. Pharmacology, “ “ “
6. Physiology.	6. Materia Medica and Pharmacy.
7. Practical Physiology.	
8. Materia Medica and Pharmacy.	

Third Year Examination

1. Physiology.
2. Practical Physiology.
3. Pathology (General and Special).
4. Practical Pathology.
5. Bacteriology.
6. Practical Bacteriology.
7. Pharmacology.
8. Practical Pharmacology.

Fourth Year Examination

1. Hygiene.
2. Medicine.
3. Clinical Medicine.
4. Surgery.
5. Clinical Surgery.
6. Therapeutics.
7. Clinical Pathology.
8. Medical Jurisprudence.

Fifth Year Examination

1. Obstetrics.
2. Gynaecology.
3. Clinical Gynaecology.
4. Surgery.
5. Clinical Surgery.
6. Medicine.
7. Clinical Medicine.
8. Clinical Ophthalmology, Otology, and Laryngology.

The Faculty of Medicine wish it to be distinctly understood that the Departmental Announcements, Courses of Study, Programme of Examinations, etc., set forth in this Calendar are for the stated academic years only, and while changes will be made as seldom, and to as slight an extent as possible, the University holds itself free to alter or amend from year to year the courses of study, schedules of examinations, rules, regulations, etc., contained herein.

POST GRADUATE INSTRUCTION

A three weeks post-graduate session of the medical school is held annually and is open to all graduates in Medicine.

The object is in no wise to train specialists in any branch of Medicine or Surgery, but to afford an annual opportunity to the general practitioner, more particularly of Western Canada, to witness with the minimum expenditure of time and money the practical and clinical application of those methods of diagnosis and treatment which have come into use since his own graduation or which, on account of local conditions, he may have hesitated to adopt in his own practice.

Most of the courses are practical in character but a short series of lectures on some of the more important every day problems met with by the general practitioner are also scheduled.

In addition to the scheduled demonstrations, clinics and lectures, individual members of the faculty will, on request, conduct a series of clinics or demonstrations on any desired aspect of the work of the following departments: Medicine, Paediatrics, Laboratory Methods, Dermatology, Psychiatry, General Surgery, Orthopaedic Surgery, Gynaecology, Obstetrics, Ophthalmology, Oto-laryngology, Urology, Anaesthesia, Radiography, etc., etc.

No fee is charged for any of the courses but registration by all physicians in attendance is requested.

The dates of the next post-graduate session are: April 24th to May 13th, 1922, (inclusive).

Post-Graduate Students in Attendance
April and May, 1921.

Dr. J. A. Hislop	Edmonton, Alta.
Dr. A. C. Armstrong	Rocanville, Sask.
Dr. B. W. Victor	Verigin, Sask.
Dr. A. N. MacLeod	Stonewall, Man.
Dr. J. S. Stewart	Oak River, Man.
Dr. F. O. Gilbart	Ethelbert, Man.
Dr. E. J. Finnerty	Hanley, Sask.
Dr. N. A. Strickland	Zealandia, Sask.
Dr. J. E. R. LeBlonde	Rosthern, Sask.
Dr. T. C. Brereton	Winnipeg, Man.
Dr. M. Hjaltasson	Lauder, Man.
Dr. A. B. Chapman	Reston, Man.
Dr. J. K. McLennan	Monrovia, California
Dr. A. C. Scott	Indian Head, Sask.
Dr. U. J. Gareau	Sintaluta, Sask.
Dr. A. S. Gibson	Piapot, Sask.
Dr. J. T. Cooper	Saskatoon, Sask.
Dr. A. Fisher	Calgary, Alta.
Dr. H. W. McGill	Calgary, Alta.
Dr. Alex. Mitchell	Macoun, Sask.
Dr. J. A. Deyell	Harris, Sask.
Dr. J. S. Clark	Brandon, Man.
Dr. H. M. Speechly	Winnipeg, Man.
Dr. J. R. Bird	Whitewood, Sask.
Dr. T. W. J. Swinburne	Margo, Sask.
Dr. Geo. B. McTavish	Winnipeg, Man.
Dr. J. H. White	Chaplin, Sask.
Dr. W. A. Murray	Winnipeg, Man.
Dr. W. H. G. Gibbs	Selkirk, Man.
Dr. M. MacKay	Transcona, Man.

RULES FOR STUDENTS

1. In case of disorderly conduct, any student may, at the discretion of the Professor, be required to leave the class room.

2. Persistence in any offence against discipline shall be reported to the Dean of the Faculty. The Dean may, at his discretion, reprimand the student or refer the matter to the Faculty Council, and in the interval suspend from classes.

3. When a student is brought before the Faculty Council, under the above rule, the Council may reprimand, fine, suspend from classes or recommend expulsion from the University.

4. Hazing, or any interference with the rights of students, involving physical violence, or personal indignity, will not be tolerated by the University.

APPOINTMENTS OPEN TO STUDENTS

Student Demonstrators. One or more Student Demonstrators may be appointed annually to assist the Professors of Anatomy, Pathology and Physiology. Certificates will be granted to the students who do this work satisfactorily.

RESIDENT HOUSE SURGEONS AND HOUSE PHYSICIANS

The Board of Directors of the Winnipeg General Hospital annually appoints twenty Resident Physicians and Surgeons.

St. Boniface General Hospital appoints annually two Resident Physicians.

Post Mortem Clerks will be appointed by the Pathologist from the Final Class, who shall keep a correct record of the pathological conditions met with at autopsies.

A number of positions on the Resident Staff in the Hospitals for Mental Disease at Brandon and Selkirk are open to graduates. They allow excellent opportunity for special study of nervous and mental disorders and are positions which carry with them a fair remuneration.

MANITOBA MEDICAL STUDENTS' ASSOCIATION

This Society, composed of Students of Medicine, meets fortnightly during the session for the reading of papers and the discussion of medical subjects.

MANITOBA MEDICAL STUDENTS' ATHLETIC ASSOCIATION

This Association has proved itself to be of considerable advantage to the students of the College. Its main object is the promotion of amateur sports amongst its members. The Association holds two meetings during the session—one during the first part and one towards the end of the term. The business of the Association is transacted by one General Executive Committee and by a working Sub-Committee for each of the following branches of athletics:—(*a*) Hockey; (*b*) Football; (*c*) Field Sports; (*d*) Curling; (*e*) Basketball; (*f*) Bowling.

Y.M.C.A.

The Medical Students' branch of the University Y.M.C.A. is well organized for the year's work. Meetings will be held weekly throughout the College year.

The members of the Association will be glad to render students, especially those entering upon their first year's work, any assistance with reference to board and rooms, second-hand books, etc.

REQUIREMENTS FOR THE DEGREE OF C.M.

The Degree of Master of Surgery (C.M.) will be conferred on any graduate in medicine of this University, or of any acceptable medical school in *His Majesty's Dominions, or in the †United States, under the following conditions:

1. The candidate shall be a graduate in medicine of at least two years' standing.

2. He shall submit satisfactory documentary evidence as to high moral and professional character.

3. He shall submit documentary detailed evidence of having before or after graduation served for at least one year as interne to a hospital of not less than seventy beds.

4. He shall present similar evidence of having since graduation been engaged for at least two additional years in surgical study and practice under the supervision of a surgeon or surgeons of repute, and of having during the said period acted as house surgeon or surgical interne to a hospital whose surgical service comprises at least 100 beds.

5. He shall submit a formal application for examination for the Degree of C.M. to this University, such application to be accompanied by (*a*) the opinion of the surgeon or surgeons referred to in the preceding paragraph as to the candidate's qualities as a surgeon; (*b*) a certificate from the superintendent of the hospital referred to in the preceding paragraph that the candidate's hospital service has been satisfactory and of the required duration; (*c*) the fee of $10.00 for the examination; (*d*) the foregoing requirements having been complied with, the candidate shall write, in the presence of one or more examiners, a thesis of not less than 1,500 nor more than 2,500 words, on a subject or proposition of surgical interest, of his own choosing and acceptable to the examiners.

6. He may be required to defend any points advocated in this thesis in conference with two or more examiners.

7. He shall, in the presence of two or more examiners, perform one or more specified operations on an animal, supplied for the purpose.

8. On acceptance for the Degree, he shall pay the required fee of $15.00 for the diploma of C.M.

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*That is any Medical School whose diploma is accepted for insertion in the Medical Register of the United Kingdom.

† That is any Medical School rated Class A by the American Medical Association.

COURSES IN MEDICINE IN DETAIL

N.B.—For key to system of numbering courses, see page 4.

DEPARTMENT OF ANATOMY

J. C. B. Grant	*Professor and Director of the Department of Anatomy*
Digby Wheeler	*Lecturer in Anatomy*
H. C. McAlister, W. F. Abbott	*Demonstrators in Anatomy*
A. W. Allum, W. Creighton, J. S. McInnis, C. R. Rice, F. M. Turner, H. W. Wadge, G. S. Williams	*Honorary Demonstrators in Anatomy*

Anatomy is studied during the First and Second Years of the Medical curriculum.

Bones are loaned to students for home study on application. It is recommended, however, that each student possess a half skeleton of his own. In order to fulfil the requirements of the classes in Practical Anatomy, the student must attend regularly and submit at weekly intervals to an oral examination on the "part" on which he is engaged. These examinations are conducted by the demonstrators, who allot marks for the student's dissection and for his knowledge of the part.

Competitive examinations are also held at intervals during the session, and certificates of merit are awarded to those attaining a high standing at these examinations. A prize is offered for the student in each of the first and second years attaining the highest standing.

Gross Anatomy—First Year Courses

1, 2. The Upper Limb, the Thorax and the Abdomen are dissected. The work in the laboratory is supplemented by lectures, demonstrations and conference dealing with the bones, joints, soft parts and surface anatomy of these regions.

Lectures, demonstrations, etc., 3 hours per week.
Laboratory, 16 hours per week.
Total, 532 hours (Didactic, 84 hours, Laboratory, 448 hours).

3, 4. **Histology.** The microscopic structure of the normal human tissues, with the methods of preparing and staining the same, is taught, followed by the microscopic examination of the various organs. When details of technique have once been mastered the student is saved as much of the routine work as possible.

Lectures and Demonstrations, 1 hour per week.
Laboratory, 3 hours per week—Autumn and Spring terms.
Total, 112 hours (Didactic, 28 hours, Laboratory, 84 hours).

Second Year Courses

5, 6. The Head and Neck, the Cerebro-spinal Nervous System and the Lower Limb are dissected. Lectures and demonstrations deal with these parts and with the Special Senses, and the Gross Anatomy of the whole body is revised.

The practical and didactic courses also include the microscopic Anatomy of the Central Nervous System.

Lectures and demonstrations, 3 hours per week.
Laboratory, 18 hours per week.
Total, 588 hours (Didactic, 84 hours, Laboratory, 504 hours).

7, 8. **Embryology.** A lecture demonstration course. Four hours per week.

Text books:

Anatomy—

Gray's Textbook of Anatomy (English Ed.); or
Cunningham's Textbook of Anatomy.
Cunningham's Manual of Practical Anatomy.
Jamieson's Companion to Manuals of Practical Anatomy.
McMurrich's Manual of Human Embryology.
Keith's Human Embryology and Morphology.

Histology—

Schafer, Stohr.

Clinical Anatomy—

Treeve's Surgical Anatomy.
Johnston's Medical Applied Anatomy.
Beesly & Johnston's Surgical Anatomy.

DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

V. H. K. Moorhouse	*Professor and Director of Department*
K. J. Austmann	*Assistant*

9, 10. **Elementary Physiology.** (For students in second year Medicine and third year Science.) Structure and functions of the cell and of the simple tissues. General Physiology. Physiology of muscle and nerve. Physiology of digestion. The circulation of blood and lymph. General mechanics of respiration. Structure and function of the kidneys, skin, etc. Textbooks, any one of Howell, Textbook of Physiology (W. B. Saunders, Philadelphia); Starling, Human Physiology (A. Churchill); Flack and Hill, Textbook of Physiology (Arnold, London). One lecture a week, both terms (Mondays, 2. p.m). In addition tutorial work will be arranged for Wednesday afternoons.

11, 12. **Advanced Physiology.** (For students in third year Medicine and fourth year Science.) Internal secretion of the ductless glands. The nervous system. The special senses. voice and speech. Physiology of reproduction, etc. Textbooks, as for the elementary course. Reference books, as directed throughout the course. Students at the end of their second year in Physiology will be expected to show a competent knowledge of both years' work. One lecture a week, both terms (Tuesdays, 2. p.m.).

13. **Elementary Practical Physiology.** (For students in second year Medicine and third year Science). Simple experiments in muscle-nerve physiology, graphic records, effects of varying conditions on muscular contractions, transmission of nerve-impulse, electrotonus, Pflüger's law, the beat of the heart and its nervous control, perfusion through blood-vessels, reflex-action, etc. Textbook, Schafer's Experimental Physiology (Longman's 1918 edition). One three-hour period throughout both terms. (Two groups, Mondays or Wednesdays, 3 to 6 p.m.).

14. **Advanced Practical Physiology.** (For students in third year Medicine and fourth year Science.) Some of the more difficult experiments of the elementary course repeated and studied in greater detail, galvanometry, blood pressure, opthalmoscope, laryngoscope, physiological and psycological experiments upon the special senses, etc. Textbook, Burton-Opitz, Practical Physiology (W. B. Saunders Co., Philadelphia). One

three-hour period throughout both terms, (two groups, Tuesdays or Thursdays, 3 to 6 p.m.).

19, 20. **Advanced Laboratory Courses** are given in connection with the fourth year work for the B.Sc. degree. The laboratories are open daily from 9 a.m. to 6 p.m. (and by arrangement till 11 p.m.) for the prosecution of original research. Application is to be made to the Professor.

21, 22. **Pharmacology.** (For students in third year Medicine). Lectures and experimental work amounting in all to about ninety hours instruction. Study of the pharmacodynamical action of related chemical compounds and other drugs. Study of groups of drugs producing similar pharmacological actions. Four three-hour periods (mornings) per week for ten weeks. Textbook, Cushny, Practical Pharmacology, (Edmunds and Cushny).

Breakages. A deposit of $5.00 is paid to the Registrar at the beginning of each session, and all breakages will be made good from this. See page 175.

MATERIA MEDICA AND PHARMACY

H. E. Bletcher..*Professor*

*1, 2. A lecture and demonstration course dealing with the sources, physical and chemical properties of the more common drugs, principles of prescription writing, physical and chemical imcompatibilities, etc. One hour per week, Second Year.

Text Books:
Materia Medica—
Bruce & Dilling, "Materia Medica and Therapeutics."
Pharmacy—
The British Pharmacopoeia.

DEPARTMENT OF BIOCHEMISTRY

A. T. Cameron..*Associate Professor*

*1, 2. **Elementary Biochemistry.** The general chemistry of animal and plant tissues. Enzyme action. The composition of food-stuffs; proteins, fats, carbohydrates, vitamines, etc. Composition of the digestive juices. Digestion of foodstuffs. Absorption of the products of digestion. Chemistry of blood; hæmoglobin and its derivatives. Chemistry and physical chemistry of respiration. Secretion of urine, etc. Chemistry of the excreta. Textbooks: Hawk's Practical Physiological Chemistry (Blakiston, Philadelphia), Robertson's Principles of Biochemistry (Lea and Febiger, Philadelphia and New York) and, for reference, Mathew's Physiological Chemistry (Wood, New York). One lecture a week, both terms.

3, 4. **Advanced Biochemistry.** Metabolism, Assimilation of food units (glucose, amino-acids, fats, etc.) in the body. Catabolism. Types of inanition. Metabolism of inanition. Relation of the endocrine glands to metabolism. Muscle metabolism and the production of energy. Abnormal metabolism of glucose, uric acid, creatine, etc.; acidosis. Energy requirements of the body. Heat maintenance. Diet. The importance of vitamines and other minor factors of a diet. Physical chemistry of living processes. Textbooks, as for the course in Elementary Biochemistry. Reference books as directed during the course. One lecture a week, both terms.

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* For key to system of numbering courses, see page 4.

5, 6. **Elementary Practical Biochemistry.** Detection of the elements in animal and plant tissue. Study of enzyme action. Measurement of enzyme activity. Properties of carbohydrates, fats, and proteins, and their derivatives. Methods of estimation of sugars, fats, amino-acids, etc. Study of the digestive juices and their action. Composition of foodstuffs, etc. Textbook: Hawk's Practical Physiological Chemistry (Blakiston, Philadelphia). Reference books, Plimmer's Practical Organic and Biochemistry (Longmans, London and New York), and Onslow's Plant Biochemistry (Cambridge University Press). One three-hour period, both terms.

7, 8. **Advanced Practical Biochemistry.** Experiments on muscular and nervous tissue and on blood. Blood analysis. Oxygen capacity, respiratory quotient, acidosis. Composition of normal and pathological urine. Quantitative estimation of the chief constituents of urine. Study of a simple problem in metabolism. Textbook: Hawk's Practical Physiological Chemistry (Blakiston, Philadelphia). Reference book: Plimmer's Practical Organic and Biochemistry (Longmans, London and New York). One three-hour period, both terms.

9, 10. **Advanced Laboratory Courses** will be given as required in connection with the fourth year work for the B.Sc. degree. The laboratories are open daily from 9 a.m. to 6 p.m. (and, by arrangement, till 11 p.m.) for the prosecution of original research.

Breakages.—A deposit of $5.00 is paid to the Registrar at the beginning of each session, and all breakages will be made good from this.

DEPARTMENT OF BACTERIOLOGY AND HYGIENE

Gordon Bell	*Professor and Director of the Department*
A. J. Douglas	*Professor of Hygiene*
F. T. Cadham	*Assistant Professor (Bacteriology and Serology)*
M. S. Fraser	*Lecturer in Hygiene*
W. J. Sharman, W. P. McCowan	*Demonstrators in Bacteriology*
E. C. Brown, A. Rigby	*Demonstrators in Hygiene*

*1, 2. **General Bacteriology.** Preparation of Media, Staining, etc.; Methods of differentiating Bacteria, etc.; Intensive study of Pathogenic Bacteria; Examination of Milk, Water, etc.; Animal Inoculations.

4. **Immunology and Serology.** Vaccine therapy, and preparation of Vaccines; Von Pirquet, Schick, and Wasserman tests, etc.

Examination and inspection of Foods.

5, 6. **Communicable Diseases; Sewage disposal.** Fieldwork.

8. **Health Laws.** Child Hygiene, vital statistics.

Text Books:
Bacteriology—
Jordan, Park, McFarland, Hiss, Muir & Ritchie, Connell.
Hygiene—Egbert, Parkes, Rosenau, Harrington.

DEPARTMENT OF PATHOLOGY

Wm. Boyd	*Professor and Director of the Department*
D. Nicholson	*Lecturer*

*1. **General Pathology.** An introductory course in which general disease processes are studied. The phenomena of inflammation, degeneration, tumour formation, and disorders of circulation are considered, and in addition, such general infections as tuberculosis and syphilis. In the practical course a large number of stained slides are given out. It is assumed that the student is familiar with the technic of preparing sections, this having been learned in the histology course. The nature of the slides is not told when they are given out, and the student is asked to draw and describe the specimens, and form his own diagnosis.

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*For key to system of numbering courses, see page 4.

Two lectures and four laboratory hours per week.

3. **Special Pathology.** The teaching of special pathology, where disease in various organs is studied, is greatly facilitated by the cooperation of the pathological department of the Winnipeg General Hospital, by means of which access is obtained to nearly 2000 pathological specimens from the operating rooms in the year. The student also attends the post-mortem examinations in the hospital. Stained specimens of disease processes in all the organs are given to the student as unknown tissues, which he is asked to draw, describe and diagnose. The student is asked to give a clinical picture of the patient from whom the tissue was taken, and any clinical details that are known are then supplied. Gross specimens are studied partly from the museum, partly from the operating rooms and autopsy room of the General Hospital. The student is encouraged to spend as much time as possible in the museum studying typical specimens with descriptions attached. At the completion of the study of the diseases of each system, the subject is reviewed with the aid of gross specimens. Students are encouraged to undertake research work in pathology during the summer months, for which purpose the facilities of the General Hospital are also available.

Three lectures and six laboratory hours per week.

5, 6. **Clinical Pathology.** Instruction is given in the more important methods used in the clinical laboratory, such as the examination of urine, gastric contents, faeces, sputum, cerebrospinal fluid, and pathological exudates, making of blood counts, etc. The methods are explained in a series of lectures, and are then practised by the student in the Clinical Laboratory of the General Hospital. Some of the simpler methods employed in blood chemistry are also demonstrated.

Twenty-five hours lectures and laboratory work.

7, 8. See 11, 12, Department of Internal Medicine.

Text Books:
Delafield & Prudden.
Todd's Clinical Diagnosis.
Boyd's Physiology and Pathology of the Cerebro-spinal Fluid.

DEPARTMENT OF INTERNAL MEDICINE

E. W. Montgomery................*Professor of Clinical Medicine and Director of the Department of Internal Medicine*

A. J. Burridge, J. R. Davidson, Chas. Hunter, A. W. Moody, W. Rogers, C. R. Gilmour, E. L. Pope, F. A. Young................*Associate Professors of Clinical Medicine*

W. Chestnut..*Associate Professor of Medicine*

D. A. Stewart (In charge of instruction at Provincial Sanatorium) *Associate Professor of Medicine and Clinical Medicine*

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* For key to system of numbering courses, see page 4.

A. B. Alexander (In charge of Infectious Diseases), R. G. Ferguson, (Qu'Appelle), E. S. Moorhead, Hugh Mackay (in charge of Dermatology), A. T. Mathers (in charge of Psychiatry).
Assistant Professors of Clinical Medicine

F. Benner, S. Campbell, F. Hart, R. R. Swan, J. H. O'Neill
Lecturers in Clinical Medicine

F. C. Bell..*Lecturer in Dermatology*

J. C. McMillan..*Lecturer in Roentgenology*

D. A. MacDonald, H. M. Murdoff, John Orr, N. W. Warner, W. Creighton, J. R. W. Nicholson, J. D. Adamson, G. S. Williams.
Demonstrators in Clinical Medicine

G. V. Bedford..*Demonstrator in Physio-Therapy*

*1. A practical and demonstration course in Medical Applied Anatomy, followed by practical instruction in the methods of examination, including normal physical signs, and their physiological variations. 24 hours, Third Year.

2. A clinical course demonstrating abnormal appearances, symptoms, physical signs, etc., with instructlon in case taking. In this course each student will be required to take the histories, and to record the results of his examination of a number of patients under the immediate supervision of an instructor. The course includes instruction in clinical chemistry and microscopy, and each student is required to perform the laboratory investigations pertaining to his own cases. 60 hours, Third Year. (Prerequisite: Course 1.)

3, 4. A course of clinical lectures once a week throughout the session. At these lectures cases exemplifying most of the commoner and some of the less common diseases are demonstrated in detail by a member of the staff. This course will be attended by students of both the Third and Fourth Years.

6. A short didactic course dealing with some of the commoner effects of disease in modifying physiological processes. 12 hours, Third Year.

8. A lecture and recitation course dealing with the general pathology and treatment of disease, illustrated by plates and morbid specimens. 40 hours, Fourth Year.

9, 10. **Ward Clinics.** Three hours per week during the Fourth Year. This course implies at least an equal number of hours of clinical work by each student, spent in history taking, and examination of cases allotted to him, together with the necessary laboratory investigations pertaining to each case. Attendance at post-mortems on any of his cases on which such are performed is also required; and complete case histories of all patients allotted to him are demanded of each student.

11, 12. **Clinical and Pathological Conferences.** These conferences are held in the Pathological Department of the Winnipeg General Hospital each Saturday morning throughout the session. The histories of cases that have died during the week are read, including the antemortem diagnosis. Post-mortem specimens are demonstrated, and the cases discussed, departures from type being emphasized, and as far as possible explained. Fourth and Fifth Years.

In addition to the foregoing special clinics are given from time to time on neurological cases in the wards of the Winnipeg General Hospital. A short lecture and conference course on Psychiatry is given to students of the Fifth Year, and psycopathic clinics throughout the session will also be attended by students of the same year in small groups for limited periods.

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* For key to system of numbering courses, see page 4.

Pulmonary Tuberculosis. Groups of four students of the Fifth Year will be received in residence at the Manitoba Sanatorium at Ninette for periods of four weeks per group. The instruction at Ninette will be devoted almost entirely to the diagnosis and treatment of incipient and early cases of consumption, and will be under the personal supervision of Dr. D. A. Stewart, Superintendent of the Sanatorium. Similarly a limited number of students of the Fifth Year are received at Saskatchewan Sanatorium, Fort Qu'Appelle and receive instruction from the Superintendent, Dr. R. G. Ferguson.

Clinical instruction will also be given at the King Edward Hospital for Tuberculosis under Dr. A. B. Alexander. These clinics will also be attended by students of the Fifth Year, and will be largely devoted to the study of the recognition and treatment of the complications met with in the later stages of the disease.

Infectious Diseases—A. B. Alexander................................*Assistant Professor*

Clinics to sections of the Fourth and Fifth Year classes will be given at the King George Hospital throughout the session.

Dermatology—Hugh Mackay........*Assistant Professor.* F. C. Bell, *Lecturer.*

(*a*) A short recitation and conference course will be given to students of the Fourth Year.

(*b*) Clinical instruction at the outdoor department of the Winnipeg General Hospital will be given at the weekly skin clinic to students of the Fourth and Fifth Years.

Roentgenology—J. C. McMillan ....*Lecturer.*

Text Books:

Clinical Medicine—
Wilson's Medical Diagnosis.
Musser's Medical Diagnosis.
Todd's Clinical Diagnosis.
Webster's Diagnostic Methods.

Medicine—
Osler, Mackenzie's "Symptoms and Their Interpretation."
Lucas' "Book of Prescriptions."

Mental Diseases—
Gulick, "Mental Diseases."
White, "Outlines of Psychiatry."

Tuberculosis—
"Diseases of the Chest and Principles of Physical Diagnosis," Norris & Landis.
"A Clinical System of Tuberculosis," Bandelier & Roepke.
"The Early Diagnosis of Tubercle," Clive Riviere.
"The Causes of Tuberculosis," Cobbett.
"Rules for Recovery from Tuberculosis," Lawrason Brown.

Contagious Diseases—
Ker, Welch & Schamberg, Schamberg, Ricketh & Byles.

Dermatology—
Walker, Morris, Schamberg, Sequeira.

THERAPEUTICS

Charles Hunter and A. J. Burridge ..*Associate Professors of Clinical Medicine*
J. C. McMillan..*Lecturer in Electro-Therapeutics*
G. V. Bedford..*Demonstrator in Physio-Therapeutics*

*1, 2. A recitation and conference course on the therapeutic application of drugs, and intended to form a logical sequence to the course in Pharmacology will be given during the Fourth Year. Non-medicinal therapeutic agents will also be dealt with, and a portion of the course will be devoted to the principles of and effects to be expected from Psychotherapy. 25 hours, Fourth Year.

3, 4. A course in clinical therapeutics to students of the Fifth Year. In this course the clinical application of the various methods at the physician's disposal will be demonstrated on cases actually undergoing treatment in the wards. The principles of hydrotherapy, mechanotherapy, electrotherapy, etc., will also be demonstrated in their application.

Text Books:
Sollman, Hare, Forchheimer, Bruce and Dilling.

DEPARTMENT OF SURGERY

J. Halpenny..............................*Professor of Surgery and Clinical Surgery and Director of the Department of Surgery*

J. McKenty ....*Associate Professor of Clinical Surgery*

H. P. H. Galloway, A. Gibson.........*Associate Professors of Clinical Surgery in charge of Orthopaedic Surgery*

B. J. Brandson, A. M. Campbell, R. D. Fletcher (in charge of Urology), J. A. Gunn, J. E. Lehmann, N. J. MacLean, W. Webster (in charge of Anaesthetics).......... *Associate Professors of Clinical Surgery*

S. J. Elkin..*Associate Professor of Operative Surgery*

W. A. Gardner (Orthopaedic Surgery), J. A. Gorrell, T. G. Hamilton, W. L. Mann, N. K. McIvor, W. W. Musgrove, O. S. Waugh, A. A. Murray (Orthopaedic Surgery)...................*Lecturers in Clinical Surgery*

J. D. McEachern, D. F. McIntyre, G. S. Fahrni ....*Lecturers in Surgery*

E. J. Boardman (Urology), D. Jones (Urology), A. P. McKinnon, M. R. MacCharles..*Demonstrators in Clinical Surgery*

C. W. Burns, F. L. McKinnon, W. H. Secord........*Demonstrators in Surgery*

*1, 2. A recitation and conference course covering the subjects of inflammation and its terminations; wounds, hæmorrhage, surgical affections of arteries, veins, lymphatics and nerves, surgical diseases of the spine, deformities, injuries and diseases of the bones and joints. 40 hours, Third Year.

3, 4. A practical and clinical course in the out-door department of the Winnipeg General Hospital, covering the work taken up in the didactic course (1, 2), also Bandaging, Surgical Applied Anatomy, Wounds, Hernia, Fractures and Dislocations and First Aid. 50 hours, Third Year.

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* For key to system of numbering courses, see page 4.

5, 6. A lecture recitation course covering the general principles of Surgery. For the recitations the class will be divided into sections, in order that the teaching may be as individual as possible. A few special lectures will be given to the class as a whole comprising a general review of certain regions of the body, *e.g.*, head, chest, stomach, etc. 40 hours, Fourth Year.

7, 8. Clinics and clinical lectures will be held throughout the session, when cases will be demonstrated at the bedside, or in the lecture room. Methods of history taking and examination will be taught and the students will be required to make complete records of cases under the guidance of clinical clerks. About 75 hours, Fourth Year.

9, 10. **Urology.** A clinical and recitation course in the out-door department of the Winnipeg General and St. Boniface Hospitals. 25 hours, Fourth Year.

Surgical Instruction in the Fifth Year

The work of the Fifth Year is entirely clinical. The students are assigned clinical clerkships at the Winnipeg General St. Boniface, the Misericordia and Children's Hospitals.

A short course is given in Operative Surgery, covering the simpler and more common operations and operations of emergency.

The duties of clinical clerks are:

1. To take a history of each patient between the hours of his admission and the visit of the attending surgeon.

2. To be present when the patient is visited by the attending surgeon, and to record all findings.

3. To make daily progress notes of the case, including a definite statement as to the healing of the wound.

4. To assist in all clinical laboratory work necessary to a diagnosis, and to record his provisional diagnosis.

5. To be present at the operation, and to assist at same if so requested, and to record the operative findings and procedures.

6. To complete the history when the patient leaves the hospital; to make a statement on the record of the condition of the patient on discharge, and the probable duration of convalescence.

7. In fatal cases to attend the autopsy, and to add the post mortem findings to the record.

Clinical lectures will be given to the Fifth Year class on important cases, and at the ward clinics the principle of instruction to small groups will be followed.

ORTHOPAEDIC SURGERY

In Orthopaedic Surgery the course will comprise a review of the anatomy and physiology of the bones, joints, muscles and peripheral nerves of the extremities and spine, with special reference to mechanical principles. The diseases and deformities, both congenital and acquired, of the extremities and spine will be taught by lectures, clinical demonstrations, diagrams, lantern-slides, X-Ray photographs and microscopic sections. Particular attention will be given to the methods of examination and diagnosis, and the mechanical problems encountered in dealing with orthopaedic cases will be fully discussed. Demonstrations in the use of plaster-of-Paris and of orthopaedic appliances will form part of the course. Students will be made responsible for case histories.

UROLOGY

One clinic per week will be given to students of the Fifth Year in Urological Diseases. The teaching will be more advanced than in the Fourth Year, the students having ample opportunity to see and assist at Cystoscopies, Syphilitic Treatments, etc.

Text Books:
Surgery—
Rose & Carless; Russell Howard; Quevain, Choyce, Spencer & Gask.
Surgery, Operative—
Jacobson Binnie, Schmeiden.
Clinical Surgery—
Pearce Gould, Choyce, Eisendrath, Da Costa.
Orthopaedic Surgery—
"Orthopaedic Surgery," by Royal Whitman.
"Orthopaedic Surgery of Injuries," by Sir Robert Jones.
Anaesthetics—
Hewitt, Flagg, Luke.

DEPARTMENT OF PEDIATRICS

C. C. Field	*Professor of Paediatrics*
R. F. Rorke	*Associate Professor of Paediatrics*
P. C. McArthur, E. L. Norton	*Lecturers*

Instruction in this department consists of:

(*a*) A lecture and conference course dealing with diseases of the newly born; infant feeding; Pediatric diagnosis, etc. 15 hours, Fourth Year.

(*b*) Clinical instruction throughout the session to students of the Fourth and Fifth Years.

Text Books:
Diseases of Children—
Still, Holt, Garrod-Batten, Morse & Talbot on Feeding.

DEPARTMENT OF GYNAECOLOGY

R. M. Simpson	*Professor of Gynaecology and Clinical Gynaecology and Head of the Department*
D. S. Mackay, J. Pullar	*Associate Professors*
A. Bercovitch, John McQueen	*Lecturers*

*1. A lecture recitation course covering the subject somewhat in the following order: Development, Anatomy, Physiology of the Respective Female Reproductive Organs, followed in each case by a discussion of their various Pathological Affections, Inflammatory, Neoplastic, Ectopic, etc., the course being illustrated by morbid specimens, plates, etc. 25 hours, Fourth Year.

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*For key to system of numbering courses, see page 4.

3, 4. Clinical instruction in the out-door department of the Winnipeg General Hospital, one hour per week throughout the session. 25 hours, Fourth Year.

5, 6. Clinical instruction in the wards and operating room, supplemented by demonstrations and practical work in the outdoor department of the Winnipeg General Hospital. Ward Clinics, 25 hours; Out-door Clinics, 25 hours; Fifth Year.

Text Books:
Ashton, Crossen, Herman & Maxwell, Sutton & Giles Manual.

DEPARTMENT OF OBSTETRICS

D. H. McCalman.........*Professor and Head of the Department of Obstetrics*
O. Bjornson, R. B. Mitchell..*Associate Professors*
J. E. Coulter, W. G. Campbell..*Lecturers*

*1. A didactic course consisting of lectures and demonstrations illustrated by diagrams, slides and models, and dealing with the Anatomy and Physiology of the female organs of reproduction, normal pregnancy, labor and the puerperium. 24 hours, Fourth Year.

2. An illustrated course of lectures, recitations and demonstrations reviewing the management of normal labor and dealing more particularly with the Pathology and management of abnormal pregnancy, labor and puerperium, care of the new born infant and its maladies.

In connection with this course practice on the manikin will be given to small sections of the class. 40 hours, Fifth Year.

3. A course of lectures, illustrated so far as possible by postmortem specimens, on *ante-natal* Pathology. 6 hours, elective.

4. Clinical instruction to small groups of students of the Fourth Year is given during the Spring Term at the Winnipeg General and Grace Maternity Hospitals.

5. A Clinical course similar to number 4 for students of the Fifth Year is given throughout the Autumn and Spring Terms at the same hospitals.

Certificates testifying to personal attendance on ten cases of labor are required of students entering for their final examination.

Text Books:
Williams, Hirst. Tweedy & Wrench, Shears. Jewett.

OPHTHALMOLOGY

J. W. Good...........*Professor of Ophthalmology and Head of the Department*
W. Harvey Smith......................................*Professor of Clinical Ophthalmology*
T. Herbert Bell, Percy G. Bell..*Associate Professors of Clinical Ophthalmology*
J. Stefansson...*Lecturer in Clinical Ophthalmology*

*1. A didactic course in which instruction will be given by lectures and recitations. The applied Anatomy of the eye, orbit and adjacent structures will be considered. The method of external examination of the eye, the principles of refraction, use of test type, trial case, retinoscope, and ophthalmoscope will be demonstrated, emphasis being laid on the relations of ophthalmoscopy to general medicine. 16 hours, Fourth Year.

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*For key to system of numbering courses, see page 4.

3, 4. A course of Clinical instruction to small groups in both the indoor and outdoor departments of the Winnipeg General Hospital. Each student will be required to estimate the refraction of patients in the out-patient clinic, and to make frequent Ophthalmoscopic examinations. The differential diagnosis of the commoner external diseases of the eye will be emphasized. Fourth Year, 6 hours; Fifth Year, 12 hours.

Text Books:
Fuchs, May, Parsons.

LARYNGOLOGY AND OTOLOGY

S. W. Prowse.........*Professor of Otolaryngology and Head of the Department*
G. W. Fletcher.......*Associate Professor of Clinical Laryngology and Otology*
A. Leishman, E. J. Washington..................*Lecturers in Clinical Laryngology and Otology*

*1. A combined didactic and practical course in which in addition to lectures and recitations dealing with the Anatomy and Physiology of the nose, throat and ear, the various methods and instruments employed in aural, laryngeal and nasal diagnosis are demonstrated to and practised by each member of the class. 16 hours, Fourth Year.

3, 4. Clinical instruction to small groups, chiefly in the outpatient department of the Winnipeg General Hospital. The indoor services of that institution are also used freely for Clinical instruction in this department. Fourth year, 6 hours; Fifth Year, 12 hours.

Text Books:
Laryngology—
St. Clair Thomson, Syme.
Otology—
Bacon, Ballenger, Syme.

MEDICAL JURISPRUDENCE

B. J. McConnell..*Lecturer*

A lecture demonstration course illustrated by specimens, drawings, etc.

The relations of the medical profession to the law and legal procedure will be considered and adequate attention paid to the discussion of—Identification, Signs of Death, Poisoning and forms of Violent Death with their *post-mortem* signs. *Ante* and *post-mortem* phenomena in their medico-legal aspects, wounds, blood stains and blood examinations, pregnancy, abortion, infanticide, offences against chastity, ante-mortem depositions, will making, civil and criminal malpractice. 15 hours, Fourth Year.

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* For key to system of numbering courses, see page 4.

Text Books:
Aitchison Robertson, Glaister.

HISTORY OF MEDICINE

*A course of lectures on this subject will be given to the Fifth Year class.

MEDICAL ETHICS

*Four lectures on this subject will be given to students of the Fifth Year.

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* Questions in either of these subjects may be given in the final papers in Medicine and Surgery.

REGULATIONS OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA.

Regulations Regarding License to Practise Medicine in Manitoba.

The College of Physicians and Surgeons, which is composed of all the medical practitioners whose names are duly entered on the Manitoba Medical Register, is neither a teaching nor an examining body, but is the sole licensing body in medicine in the Province. The University of Manitoba is the sole examining body.

If the applicant for license be a graduate in medicine of the University of Manitoba a license to practise in the Province is granted without further examination by paying the license fee of $125.

If the applicant for a license be a graduate in medicine of any other Canadian University, he must send to the Registrar of the College of Physicians and Surgeons, prior to the 1st of March, his medical degree (as a credential), and upon this being found satisfactory he shall be reported to the University as eligible to write at the regular examination, which is held once a year, beginning on the third Monday in April. A five-year medical course is now required.

The diploma of the Medical Council of Canada entitles to registration with the College of Physicians and Surgeons of Manitoba, without further examination upon payment of the regular license fee.

In the case of a graduate from any University in the United States or other foreign country, he shall, in addition to sending his degree (or diploma), be required to send complete detailed and authoritative information as follows:

First.—As to his matriculation; giving the name and address of the institution in which he was examined, the subjects, and the extent of each required.

Second.—As to medical course; the number and length of sessions, subjects taught, number of courses in each, and number of lectures in each course, amount of clinical instruction in the different courses, etc., etc.

All candidates, Canadian or foreign, writing for license must show that the course of studies of such college or other incorporated body, at the time such member was admitted thereto, was at least equivalent to the requirements for a similar course by the University of Manitoba at the time such member shall seek to be registered as aforesaid. The applicant must have graduated from an approved college which gave him a regular Five Year course; or, if he graduated with a Four Year course, he must show that he has since completed this requirement by having taken a fifth year at some approved medical college.

On receipt of this information the College of Physicians and Surgeons will decide as to the eligibility or otherwise of the applicant to write for license.

Each applicant, at the same time that he sends his credentials to the Registrar of the College of Physicians and Surgeons, should send $15, examination fee, in a separate communication addressed to the Registrar of the University, which will be returned to him in case he is not permitted to write.

A candidate failing in three or more subjects must write on the whole examination again, and can only do so at a subsequent regular spring examination. If he fail in two subjects, or less, he will be required to write on these only, and may do so at the time of the Supplemental Examinations, which begin on the second Thursday in September, or at any subsequent regular examination.

The subjects of examination for license are: Medicine, Surgery, Obstetrics, Diseases of Children, Gynaecology, Materia Medica and Therapeutics, Clinical Medicine, Clinical Surgery, Clinical Ophthalmology, Otology, and Laryngology. Fifty per cent. is required in each to pass.

The fee for license, $100.00, is payable to the Registrar of the College of Physicians and Surgeons immediately after the receipt by him from the University of a satisfactory report of the candidate's examination.

No interim permit to practise is granted.

Licentiates in Great Britain, in good standing, may register in Manitoba on presenting the British certificate of registration, and on paying the registration fee, $100.00.

J. E. COULTER, M.D., C.M.,
Registrar, College of Physicians and Surgeons of Manitoba
604 Boyd Building, Winnipeg.

CURRICULUM IN LAW

The University of Manitoba confers one degree in Law, viz., Bachelor of Laws (LL.B.). The following are the requisities for proceeding in course to this degree.

BACHELOR OF LAWS

A teaching body, known as The Manitoba Law School, is maintained under the direction of trustees appointed jointly by the University of Manitoba and the Law Society of Manitoba and a three years' course of instruction in Law is provided, covering the work required by the University for the degree of Bachelor of Laws and by the Law Society for admission to practise as Barrister or Attorney. The work of this course as required of candidates for the University degree is outlined below.

Matriculation

The requirements for Matriculation for law have recently been increased and all students entering upon the course must now have standing of the First Year in Arts, or its equivalent, Latin being a required subject both for Arts Marticulation and the First Year in Arts. For details see page 36. *This Matriculation for Law must be clear of all conditions before the student enters upon the First Year of the course.*

Beginning with the opening of the 1922-23 session all students entering upon the course for the LL.B. degree shall be required to have the standing of the Second Year in Arts, or its equivalent, and shall have taken the subject of Latin up to the end at least of the First Year in Arts.

FIRST YEAR

1. **Contracts.** Books recommended: Anson, Law of Contract; Capoin, Selected Cases Illustrating the Law of Contracts. Such additional leading cases as may be prescribed by the lecturer.

2. **Torts.** Books recommended: Underhill on Torts; Redcliffe and Miles, Cases Illustrating the Law of Torts. Such additional leading cases as may be prescribed by the lecturer.

3. **Property, Real and Personal** (1). (*a*) **Real Property.** Book recommended: Williams, Real Property.

Statutes, Manitoba, 1913, Cap. 62, Escheats Act; 63, Estates Tail Act; 106, Joint Tenancy Act; 116, Real Property Limitation Act; 150, Partition Act; 181, Registry Act. 1919, Cap. 26, Dower Act.

(*b*) **Personal Property.** Book recommended: Williams, Personal Property.

4. **Constitutional Law and History** (English). Books recommended: Taswell Langmead, English Constitutional History; Thomas, Leading Cases in Constitutional Law.

Such additional leading cases as may be prescribed by the lecturer.

5. **Criminal Law.** Books recommended: Kenny, Outlines of Criminal Law; or Harris, Principles of Criminal Law.

Statutes, Canada, 1906, Cap. 146: The Criminal Code (omitting the sections dealing with procedure).

6. **Practice and Procedure** (Civil and Criminal)—**Elementary.** (*a*) **Civil.** (1) The History and Development of the Jurisdiction and the Jurisdiction of The Supreme Court of Canada; The Court of Appeal for Manitoba; The Court of King's Bench; The County Court; The Surrogate Court; The Exchequer Court of Canada.

The student is particularly referred to the following Statutes:

R.S.C. 1906.	Cap. 139.	Supreme Court Act.	ss. 2, 35 to 47, 60 to 66.
R.S.M. 1913.	Cap. 43.	Court of Appeal Act.	ss. 5 to 9.
R.S.M. 1913.	Cap. 46.	King's Bench Act.	ss. 10 to 24, 80.
R.S.M. 1913.	Cap. 44.	County Courts Act.	ss. 56 to 66.
R.S.M. 1913.	Cap. 47.	Surrogate Courts Act.	ss. 19 to 21, 61 to 64
R.S.C. 1906.	Cap. 140.	Exchequer Court Act.	ss. 3, 19 to 32.

The Sections Relating to Rules—King's Bench Act—ss. 53, 82 to 87 County Courts Act—ss. 21 to 24, 67, 68. Surrogate Courts Act—ss. 29, 30.

The General Sections and Rules—King's Bench Act—ss. 1 to 9, 25 to 28. Rules 1 to 7, 998, 999. County Courts Act—ss. 1 to 8. Surrogate Courts Act—ss. 1 to 18.

(2) The following Subjects, Rules and Provisions:

	K.B. Act Rules	C.C. Act Sections
(*a*) Security for Costs	984-987	Practice
(*b*) Manner and Place of Commencement of Actions	172-186	69- 76 92-102
(*c*) Service	267-299	102-105
(*d*) Time for Filing Defences	182	111-112-118
(*e*) Default Judgments	607-623	106-110
(*f*) Settlement Signing and Entry of Judgments and Orders	642-661	
(*g*) Miscellaneous Proceedings	369-383	
(*h*) Computation of Time	384-397	

Such other Acts, Sections and Rules as may be prescribed by the lecturer.

N.B.—The above sections are given for information only, and are not necessarily exhaustive.

(*b*) **Criminal.**

Statutes, Canada, 1906, Cap. 146: The Criminal Code; Part I, ss. 10 to 12; Parts XI and XIV.

Statutes, Manitoba, 1913, Cap. 46: King's Bench Act. (Such jurisdiction sections as may be prescribed by the lecturer.)

The student will be expected to have a knowledge of the history of the Manitoba Courts of Criminal Jurisdiction.

7. **History of English Law.** Books recommended: Jenks, Short History of English Law. Holdsworth, History of English Law, Vol. I; Maitland, The Forms of Action at Common Law.

8. **Roman Law.** Book recommended: Leage, Roman Private Law.

SECOND YEAR

1. **Equity.** Books recommended: Maitland, Lectures on Equity; Snell, Principles of Equity; Strahan, Leading Cases in Equity. Such additional leading cases as may be prescribed by the lecturer.

2. **Wills, Probate and Administration. Executors and Administrators.**

Books recommended: Hawkins, Wills; Williams, Legal Representatives.

Statutes, Manitoba, 1913, Cap. 47: Surrogate Courts Act and Rules; 54, Devolution of Estates Act; 200, Manitoba Trustee Act; 204, Wills Act.

3. **Evidence.** Books recommended: Powell, Evidence; Cockle, Leading Cases in the Law of Evidence.

4. **Sale of Goods.** Book recommended, Falconbridge, Sale of Goods. Statutes, Manitoba, 1913, Cap. 174: Sale of Goods Act.

5. **Bills and Notes.** Book recommended: Russell on Bills.

Statutes, Canada, 1906, Cap. 119, Bills of Exchange Act.

6. **Agency.** Book recommended: Bowstead, Agency.

7. **Corporations and Partnerships.** (*a*) **Corporations.** Books recommended: Masten and Fraser, Company Law; Robson and Hugg, Leading Cases in Company Law. Such additional leading cases as may be prescribed by the lecturer.

Statutes, Manitoba, 1913, Cap. 35: Companies' Act; 205, Companies' Winding-Up Act and Rules.

Statutes, Canada, 1906, Cap. 79: Companies' Act; 144, Winding-Up Act.

(*b*) **Partnership.** Book recommended: Pollock, Digest of the Law of Partnership.

Statutes, Manitoba, 1913, Cap. 151: Partnership Act.

8. **Insurance.** Book recommended: Porter, Laws of Insurance.

Statutes, Manitoba, 1913, Cap. 99: Life Insurance Act; 103, Fire Insurance Policy Act.

9. **Practice and Procedure.** Book recommended: Odgers, Pleading and Practice—Chapters 6 to 10, 12 and 13, so far as applicable to Manitoba.

The following subjects, rules and provisions:

(1) Pleading—

I. Framework—

	K.B. Act Sections or Rules	C.C. Act Sections
(*a*) Statement of Claim	300-301	92- 97
(*b*) Statement of Defence	302-317	113-117
(*c*) Counterclaims	302-317	120-125
(*d*) Third Party Procedure	223-233	
II. Rules and demonstration of pleading	318-343	
III. Amending and striking out pleading	345-356	
IV. Pleading matter arising pendente lite	357-361	
(2) Transmission of Interest pendente lite	540-551	219-221
(3) Payment into Court	552-559	126-131
(4) Discontinuance, Dismissal and Consolidation of Actions	560-563	
(5) Preparation and Entry for Trial (including instructions as to the use of law reports, digests and text-books and the preparation of briefs)	ss. 49-51	
(6) Trials, rules	564-597	132-137 149-163
(7) Evidence at Trials	476-486 498-518	138-139 145-148

(8) Petitions of Right.

Statutes, Manitoba, 1913, Cap. 152.

Statutes, Canada, 1906, Cap. 142.

Such other Acts, Sections and Rules as may be prescribed by the lecturer. The above sections are given for information only, and are not necessarily exhaustive. Students are liable to be examined on work covered in First Year Civil Procedure.

10. **Property (Real and Personal) II.** (*a*) **Real Property.** The Torrens System, Old and New System Conveyancing and Land Titles.

Statutes, Manitoba, 1915, Cap. 171: Real Property Act; 181, Registry Act.

Such leading cases on the Torrens System as may be prescribed by the Lecturer.

(*b*) **Personal Property.** Bailment, Alienation of Personal Property, Bills of Sale, Chattel Mortgages, Gifts, Conditional Sales, Liens, Executions, Sales in Bulk, Assignments, Bills of Lading, Warehouse Receipts, Delivery Orders, Statutes of Limitations.

Book recommended: Williams, Personal Property.

Statutes, Manitoba, 1913, Cap. 17: Bills of Sale and Chattel Mortgage Act; 23: Bulk Sales Act; 66: Executions Act; 115: Lien Notes Act.

Statutes, Canada, 1906, Cap. 118: Bills of Lading Act.

Students are liable to be examined on work covered in First Year Personal Property.

11. **Landlord and Tenant.** Book recommended: Foa, Outline of the Law of Landlord and Tenant.

Statutes, Manitoba, 1913, Cap. 55: Distress Act; 109: Landlord and Tenant Act.

12. **Ancient Law.** Book recommended: Maine, Ancient Law (with Introduction and Notes by Sir F. Pollock).

N.B.—Students who have passed the First Year Examination under the old curriculum will be required to pass in the following subject, now included in the First Year Course:

13. **Roman Law.** Vide First Year (8).

THIRD YEAR

N.B.—For the Session 1921-1922 only the following will be the Curriculum for the Third Year:

1. **Real Property.** Vide Second Year (10) (*a*).

2. **Landlord and Tenant.** Vide Second Year (11).

3. **Equity.** Jurisdiction of Chancery; Nature of Equitable Interests; Formation of an Expressed Trust; Duties; Powers and Rights of Trustees; Breach of Trust; Constructive Trusts; Mortgages; Conversion; Satisfaction: Ademption; Married Women's Property. Book recommended: Strahan's Leading Cases in Equity, and the following additional cases: Grey v. Manitoba and North Western Railway, 11 M.R. 42, L.R. (1897), A. C. 25. Jones v. Tucker, 53 S.C.R. 431. Re Walton, 20 M.R. 686. British America Elevator Co. v. Bank of British North America, 26 D.L.R. 587, 9 W.W.R. 1368 (1919) 2 W.W.R. 748. Kreglinger v. New Patagonia Meat and Cold Storage Co., L.R. (1914), A.C. 25.

Statutes, Manitoba, Cap. 200 of Trustees and Executors, etc.

4. **Commercial Law.** (*a*) Negotiable Instruments. Vide Second Year (5).

(*b*) Sale of Goods. Vide Second Year (4).

(*c*) Principal and Surety.

Book recommended: De Colyar, Guarantees.

(*d*) Principal and Agent. Vide Second Year (6).

A separate examination will be set on each of the above subjects.

5. **Torts.** Assault; False Imprisonment; Malicious Prosecution; Maintenance; Injuries in Family and Contractual Relations; Defamation, (1) Libel, (2) Slander, (3) Slander of Title, (4) Slander of Goods; Deceit; Trespass to Land and Dispossession; Trespass to Goods and Conversion; Negligence; Nuisance; Tort and Contract; Damage by Intervention of Third Party; Breach of Statutory Duty; Contribution between Joint Tortfeasors; Tort and Felony; Survival of Causes of Action; Married Women and Infants; Volenti Non Fit Injuria; Master and Servant; Jurisdiction. Book recommended: Radcliffe and Miles' Cases Illustrating the Law of Torts.

6. **Company Law.** Vide Second Year (7) (*a*).

7. **Practical Statutes.**

Manitoba. 1913, Cap. 125, Mechanics' and Wage Earners' Lien Act.

Canada. 1906, Cap. 120, Interest Act; 1913, Cap. 31, Bank Act; 1919, Cap. 36, Bankruptcy Act and Rules.

Such other Statutes as may be prescribed by the lecturer.

8. **Civil Procedure.**

	K.B.	C.C.
Pleading and Demonstrations of Pleading, etc.		313-327
Judgments and Motions	617-641	172-175
Enforcement of Judgments and orders	658-758	176-218
Infants		
Extraordinary Remedies—		
Attachment	809-855	241-262
Replevin	856-871	222-240
Interpleader	896-927	289-295
Costs	934-983	164-171

Appeals—The Court of Appeal Act; K.B. Act, ss. 44-48, Rules 672-684; County Court Act, ss. 328-346, Surrogate Court Act, s. 92.

Such other sections and rules of the various Acts as may be prescribed by the lecturer.

(Note.—Students are liable to be examined in work covered in First and Second Year Civil Procedure.)

9. **History of English Law.** Vide First Year (7).

10. **Criminal and Crown Office Procedure.** Criminal Code—Provisions of, relating to Procedure; The Law of Habeas Corpus; Certiorari; Quo Warranto; Prohibition; Mandamus.

Statutes, Dominion, Cap. 146, Criminal Code (Applicable portion). For further information students are referred to the following: Criminal Code, Parts XI to XIV; XVI to XXI, and XXIV.

Crown Office Procedure

	C. Code.	K.B. Rules
Certiorari	1120	
Prohibition		893-895 and s. 25 (*h*)
Habeas Corpus	1120	
Quo Warranto		
Mandamus		872-886, ss. 25 (*h*); 26 (*c*)
Petition of Rights—Dom. and Prov. Act.		

11. **International Law.** Books recommended: Hall and Bentwich's Leading Cases.

THIRD YEAR

N.B.—Commencing with the Session 1922-1923 the following will be the Curriculum for the Third Year:

1. **Constitutional Law and History (Canadian).** Book recommended: Clement, Canadian Constitution.

Statutes—The British North America Act and such subsequent Statutes as may be prescribed by the lecturer.

Such leading cases as may be prescribed by the lecturer.

2. **Equity—Trusts and Trustees.** Book recommended: Underhill, Trusts and Trustees.

Statutes, Manitoba, 1913, Cap. 200, Manitoba Trustee Act.

3. **Evidence** (Syllabus to be drafted.)

Statutes, Manitoba, 1913, Cap. 65, Manitoba Evidence Act.

Statutes, Canada, 1906, Cap. 145, Canada Evidence Act.

4. **Practice and Procedure (Civil and Criminal).** (*a*) Civil Procedure. Book recommended: Odgers, Pleading and Practice, Chapters 15 and 16, in so far as applicable in Manitoba.

The following subjects, rules and provisions:

	K.B. Act Rules	C.C. Act Sections
1. Discovery and Production	398-432 424-441	119
2. Interrogatories	423	
3. Demurrers and Special Cases	302 (*c*) 304 463-469	
4. Motions	442-462	
5. Evidence on Motions	487-495	
6. (*a*) Petitions	772	
(*b*) Administration	773-793	
(*c*) Partition	794	
(*d*) Originating Notices	928-933	
7. Judgments on Motion	625-641	
8. Executions	685-700 709-746	176-218
9. (*a*) Attachment of Debts	759-771	263-288
(*b*) Attachment of Persons	701-708 809	
(*c*) Attachment of Goods	810-854	241-262
(*d*) Replevin	856-871	222-240
(*e*) Interpleader	896-927	289-295
10. (*a*) Mandamus	s. 26 (*o*) Rules 872-886	
(*b*) Prohibition (in civil cases)	893-895	
(*c*) Quo Warranto		
(*d*) Habeas Corpus (in civil cases)		
11. Appeals to Court of Appeal—		
(*a*) From K.B. Court of Appeal Act		
(*b*) From C.C.		334-346
(*c*) From Surrogate Court. Surrogate Court Act	s. 92 Rules 61- 64	
(*d*) Appeals from Referees, Local Judges and Taxing Masters	672-684	
12. (*a*) Costs	934-952	164-171
(*b*) Taxation of Costs	953-983	

Such other Acts, sections and rules as may be prescribed by the lecturer. The above sections are given for information only and are not necessarily exhaustive. Students are liable to be examined on work covered in First and Second Years.

(*b*) **Criminal Procedure.**

Statutes, Canada, 1906, Cap. 146, The Criminal Code—Parts XV; XVI; XVIII; XIX and XXII.

The following subjects:

(1) Certiorari.
(2) Habeas Corpus in Criminal matters.
(3) Prohibition to Courts of Criminal Jurisdiction.

N.B.—Students are liable to be examined on work covered in First Year Criminal Procedure.

5. **Conflict of Laws.** Book recommended: Dicey, Conflict of Laws.

6. **Mortgages.** Book recommended: Falconbridge, Law of Mortgages Statutes, Manitoba, 1913, Cap. 130, Mortgage Act.

7. **Suretyship.** Book recommended: De Colyar, Guarantees.

8. **Practical Statutes.** Manitoba, 1913, Cap. 125, Mechanics' and Wage Earners' Lien Act. Canada, 1913, Cap. 31, Bank Act; 1906, Cap. 120, Interest Act; 1919, Cap. 36, Bankruptcy Act and Rules.

Such other Statutes as may be prescribed by the lecturer.

9. **Rules of Interpretation and Drafting.** Books recommended: Maxwell, Statutes; Beal, Cardinal Rules of Legal Interpretation.

Statutes, Manitoba, 1913, Cap. 105, Manitoba Interpretation Act.

Statutes, Canada, 1906, Cap. 1, Interpretation Act.

10. **Domestic Relations.** Book recommended: Eversley, Domestic Relations.

Statutes, Manitoba, 1913, Cap. 124, Master and Servant Act; 122, Marriage Act; 206, Wives' and Children's Maintenance and Protection Act.

The student will be required to have a knowledge of the law and practice in Divorce including the Divorce Rules and forms of the Court of King's Bench for Manitoba.

11. **Public International Law.** Books recommended: Hall, International Law; Bentwich, Leading Cases and Statutes on International Law.

Such additional leading cases as may be prescribed by the lecturer.

12. **Jurisprudence.** Book recommended: Salmond, Jurisprudence.

13. **Legal Ethics.** The Canons of Legal Ethics as approved and adopted by the Canadian Bar Association, together with lectures thereon.

It is compulsory that all students pursuing the above curriculum, who reside in Winnipeg or its environs, shall attend at least 70 per cent. of the lectures given in the Law School in their respective years. Students residing elsewhere may, at the discretion of the trustees of the Law School and the University Board of Studies, be accepted as extra-mural students. Application for this privilege should be made to the Registrar.

Applications will not be accepted for extra-mural registration in Law from students resident outside the Province of Manitoba, except where such students are graduates in Arts of the University of Manitoba, or of some other University recognised by it.

Students are enrolled by the Recorder of the Law School as candidates for the LL.B. degree in any year of the course only on presentation of a certificate of registration for the year from the Registrar of the University.

The first term of the 1921-22 session extends from September 19th to December 23rd, 1921, inclusive, and the second term from January 3rd to April 7th, 1922, inclusive. The examinations will be given in April, beginning on the 24th. The period, September 12th to 17th, inclusive, is registration period in the Law School. Students who fail to register during this time will be required to pay an additional $4.00 over and above their tuition fee. No registration will be accepted after September 24th except in special cases from non-resident students.

The following fees are required:

By the University—

Registration (initial enrolment)	$ 2.00
Law Students' Association (each year)	10.00
Degree, Final Year	10.00

By the Law School—

Tuition, each year	$50.00
Examination, each year	8.00
Late Registration	4.00

The above information may be supplemented, more particularly on the side of the requirements of the Law Society of Manitoba, for admission to practice, by procuring a copy of the Curriculum of the Manitoba Law School from Mr. R. J. Russell, Recorder, Law Library, Court House, Winnipeg.

MANITOBA LAW SCHOOL

(Under the joint direction of the Law Society of Manitoba and the University of Manitoba.)

BOARD OF TRUSTEES, 1921-1922

R. W. Craig, B.A., K.C.,
(Representing the Law Society)

J. B. Coyne, B.A., K.C.
(Representing the Law Society)

E. Loftus, M.A., LL.B., K.C.,
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(Representing the University)

Hon. H. A. Robson, K.C., LL.D., *Chairman.*

MANITOBA LAW SCHOOL

STAFF OF LECTURERS

1921-1922

Dean	J.T. Thorson, B.A., LL.B.

First Year

Contracts	J. T. Thorson, B.A., LL.B.
Torts	J. T. Thorson, B.A., LL.B.
Real Property	H. W. H. Knott, M.A.
Personal Property	A. H. J. Andrews, B.A.
English Constitutional Law and History	W. J. Lindal, B.A., LL.B.
Criminal Law	R. B. Graham, K.C.
Criminal Procedure	R. B. Graham, K.C.
Civil Procedure	E. K. Williams
History of English Law	H. W. H. Knott, M.A.
Roman Law	H. W. H. Knott, M.A.

Second Year

Equity	H. W. H. Knott, M.A.
Wills, Probate and Administration	H. W. H. Knott, M.A.
Evidence	Hon. C. P. Fullerton
Sale of Goods	L. J. Elliott, LL.B.
Bills and Notes	L. J. Elliott, LL.B.
Agency	J. T. Thorson, B.A., LL.B.
Corporations and Partnerships	W. L. McLaws
Insurance	L. J. Elliott, LL.B.
Civil Procedure	W. C. Hamilton, LL.B.
Real Property	J. T. Thorson, B.A., LL.B.
Personal Property	J. T. Thorson, B.A., LL.B.
Landlord and Tenant	E. Loftus, M.A., LL.B., K.C.

Third Year

Real Property Act	J. T. Thorson, B.A., LL.B.
Landlord and Tenant	E. Loftus, M.A., LL.B., K.C.
Equity	H. W. H. Knott, M.A.
Negotiable Instruments	L. J. Elliott, LL.B.
Sale of Goods	L. J. Elliott, LL.B.
Suretyship	J. T. Thorson, B.A., LL.B.
Agency	J. T. Thorson, B.A., LL.B.
Torts	E. J. Thomas, B.A., LL.B.
Company Law	W. L. McLaws
Practical Statutes	J. T. Thorson, B.A., LL.B.
Civil Procedure	E. K. Williams
History of English Law	H. W. H. Knott, M.A.
Criminal Procedure	R. B. Graham, K.C.
International Law	W. H. Trueman, K.C.

CURRICULUM IN PHARMACY

DIPLOMA IN PHARMACY

The University of Manitoba has entered into an arrangement with the Pharmaceutical Association of Manitoba whereby the work of instruction in Pharmacy of students desiring to qualify as licensed Pharmaceutical Chemists in Manitoba (formerly carried on by the Association in its own college, known as the Manitoba College of Pharmacy), is undertaken by the University. The Association continues to prescribe the preliminary educational qualifications, the conditions of apprenticeship and practical training, admission fees, etc., and issues the license, the University being responsible only for the work of instruction and examination. Similarly, the Association determines the value of all professional certificates or other like credentials from other Associations or institutions, and reports to the University on the credit to be given thereon on the course for the diploma in Pharmacy. Every candidate for registration as a Certified Apprentice must produce evidence that he has passed the Matriculation Examination for Arts or Science of the University of Manitoba, or in lieu thereof evidence that he has passed an examination reasonably equivalent to the said Matriculation examination. Such standing must be clear of all conditions. Intending students must have their period of apprenticeship certified on special forms obtainable on request from the Registrar of the Pharmaceutical Association. Such certificates must be presented to the Registrar of the Association for his verification not later than August 15th of the year in which the student intends to enter the University Course in Pharmacy.

The course covers two academic years, as follows:

First Year

			Fall Term		Spring Term	
Course Nos.	Page	SUBJECT	Lecture Hours per week	Lab. Hours per week	Lecture Hours per week	Lab. Hours perweek
1, 2, 23, 24	83	Chemistry	4	3	4	3
1, 2, 5, 6,	143	Pharmacy	3	3	3	3
9, 10	143	Materia Medica	1	3	1	3
13, 14	143	Prescriptions	2		2	
9	81	Mineralogy	2			
5, 6	89	Zoology	2	2		
1, 2, 3, 4	79	Botany	2	2	2	2

Second Year

5, 6, 27, 28	83-4	Chemistry	3	6	3	6
3, 4, 7, 8	143	Pharmacy	2	6	2	6
1, 2, 3, 4	77	Physics	3	2	3	2
11, 12	143	Materia Medica	2	3	2	2
2, 4	85	Physiology				

The following excerpts from the "Manitoba Pharmaceutical Act" touching the matters of preliminary educational qualification, conditions of apprenticeship, etc., are appended:

THE PHARMACEUTICAL ACT

(4 Geo. V., Cap. 78, 1914)

* * * * *

15. Before any candidate shall be entitled to be registered as a certified apprentice he shall,—

(*a*) produce to the council satisfactory evidence of a good moral character;

(*b* pass such examination or examinations as the council shall have prescribed or shall prescribe, or produce to the council satisfactory evidence of requisite knowledge.

16. Before any candidate shall be entitled to be registered as a certified clerk he shall,—

(*a*) produce to the council satisfactory evidence that he has actually served as a certified apprentice for at least two years to a licensed pharmaceutical chemist who has during such period been engaged in actual practice as a compounder of physicians' prescriptions;

(*b*) pass such examination (to be called the "minor examination") as the council shall have prescribed or shall prescribe, or produce to the council other satisfactory evidence of requisite knowledge and experience.

(2) No person shall be competent to be registered as a certified clerk unless he shall have attained the age of at least eighteen years.

17. Before any candidate shall be entitled to be registered as a licentiate pharmaceutical chemist he shall,—

(*a*) produce to the council satisfactory evidence that he has served at least two years as a certified clerk or at least four years as a certified apprentice to a licensed pharmaceutical chemist who has been during such periods respectively in actual practice as a compounder of physicians' prescriptions, and has attended such course of instruction as the council shall prescribe; time spent in attendance on a regular course of lectures and instruction in any college or school of pharmacy recognized and approved by the council shall be considered part of such periods of service respectively;

(*b*) produce to the council satisfactory evidence that he has passed the minor examination;

(*c*) pass such examination (to be called the "major examination") as the council shall have prescribed, or shall prescribe, or produce to the council other satisfactory evidence of requisite knowledge and experience.

(2) No person shall be registered as a pharmaceutical chemist who has not attained the age of twenty-one years.

19. The council may in its discretion accept the diploma or other authenticated certificate of examination of any other competent examining board out of the Province of Manitoba, or of the University of Manitoba, as sufficient evidence of qualification of any applicants to be registered under this Act as certified apprentice, certified clerk or pharmaceutical chemist respectively.

DEGREE IN PHARMACY

Bachelor of Science in Pharmacy

The University of Manitoba confers the degree of Bachelor of Science in Pharmacy. The following are the requisites for proceeding in course to this degree.

Matriculation

The requirements for Matriculation are the same as for Matriculation for Arts or Science (see pages 23-32).

FIRST YEAR

			Fall Term		Spring Term	
Course Nos.	Page	SUBJECT	Lecture Hours per week	Lab. Hours per week	Lecture Hours per week	Lab. Hours per week
1, 2; 3, 4	51	English	4	----	4	----
1; 4; 5, 6	72	Mathematics	6	----	6	----
1, 2; 3, 4	77	Physics	3	2	3	2
1, 2; 21,22	83	Chemistry	3(+1)	3	3(+1)	3
9	81	Mineralogy	2	----	----	----
		One of—				
5, 6	56	French	3	----	3	----
1, 2 or 3, 4; 5, 6	57-58	German	3	----	3	----

SECOND YEAR

9, 10; 17, 18	77	Physics	3	3	3	3
3, 4; 25, 26	83-84	Chemistry	3	6	3	6
1, 2; 3, 4	89	Zoology	2	2	2	2
1, 2; 7, 8	79-80	Botany	2	2	2	2
1, 2; 5, 6	143	Pharmacy	3	4	3	4
9, 10	143	Materia Medica	2	----	2	----
13, 14	143	Prescriptions	2	----	2	----

THIRD YEAR

7,8; 11, 12; 33, 34	83-84	Chemistry	4	9	4	9
9, 10; 11, 12; 14	80	Botany	3	5	4	5
3, 4; 7, 8	143	Pharmacy	2	3	2	3
11, 12	143	Materia Medica	2	3	2	3

FOURTH YEAR

The Courses for this Year are yet to be outlined.

Courses in Pharmacy in Detail

DEPARTMENT OF PHARMACY

Henry E. Bletcher, B.Sc. (Phar.), F.C.I.C.. *Professor*
Dougald McDougall.. *Demonstrator*

N.B.—For key to system of numbering courses, see page 4.

1, 2. **Pharmacy I.** First Term: An exposition of the principles on which pharmaceutical operations are based; the utilization of these processes for specific ends; the arithmetical calculations required in operative pharmacy; the historical development of pharmacy. Second Term: An extended consideration of the galenical preparations of the British Pharmacopoeia; the comparison of other important national pharmacopoeias with the British Pharmacopoeia. Three hours a week.

3, 4. **Pharmacy II.** The application of Chemistry to the preparation of medicines both inorganic and organic with especial reference to the British Pharmacopoeia; methods of manufacture; characters of pure products; possible impurities; tests. Study of unofficial chemicals of interest. Two hours a week.

5, 6. **Practical Pharmacy I.** This course includes practice in the physical operations used in pharmacy such as determination of weight, volume, temperature, specific gravity, melting point, boiling point, etc.; the study of simple heat phenomena; simple heat processes; filtration; evaporation, crystallization, etc.; distillation; dispensing of classes of preparations commonly prescribed by physicians; dispensing of difficult prescriptions; care of apparatus; methods of work. Three hours a week.

7, 8. **Practical Pharmacy II.** The preparation and purification of typical inorganic and organic chemical substances used as medicines; the manufacture of galenical preparations; the assay of selected preparations. Six hours a week.

9, 10. **Materia Medica I.** The detailed study of important organic drugs, particularly those of the British Pharmacopoeia; the principal facts relating to their sources, preparation, identification, purity, characteristics, constituents, storage and toxicology. One hour lecture; three hours laboratory a week.

11, 12. **Materia Medica II.** The study of the chemical nature of important classes of plant constituents including among others the organic acids, fixed oils, volatile oils, alkaloids, glucosides, tannins, carbohydrates; products of destructive distillation; fermentation products. Two hours a week.

13, 14. **Prescriptions.** This course includes the study of the Latin of Pharmacy, posology, prescription arithmetic, methods of compounding prescriptions, recognition and treatment of incompatibilities, the Pharmaceutical Act, and all other topics of the course in Pharmacy not specifically classified elsewhere. Two hours a week.

CURRICULUM IN AGRICULTURE

The University of Manitoba confers a degree in Agriculture, viz., Bachelor of Science in Agriculture (B.S.A.). The following are the requisites for proceeding in course to this degree.

BACHELOR OF SCIENCE IN AGRICULTURE

The course for the degree of Bachelor of Science in Agriculture ordinarily extends over a period of five years. It is only during the last three, however, that the student is definitely regarded as a candidate for the degree.

Entrance Requirements

A student may be admitted to the course leading to the degree of B.S.A. by fulfilling either of the following requirements:

1. The completion of the first two years of the Diploma Course in Agriculture of the Manitoba Agricultural College, with a grade in the Second Year of that course of at least 65 per cent. in English and 60 per cent. in general proficiency. For details as to the terms of admission, curriculum, standards, etc., of the Diploma Course, see the calendar of Manitoba Agricultural College. An equivalent standing secured in another Agricultural College whose standards are recognized by the University as substantially equivalent to those of Manitoba Agricultural College will be accepted in lieu of the above.

Students entering with this qualification are regarded as taking the "full degree course."

2. The Grade XII. or First Class Teacher's Non-professional Certificate of the Manitoba Department of Education or the Senior Matriculation of a recognized University, or their equivalent.

Students entering with this qualification are regarded as taking the "teachers' course." It is intended to prepare teachers of agriculture for consolidated schools and intermediate and high schools. The requirements of the Department as to professional training must, of course, be complied with.

Provision is being made whereby students entering upon the degree course with previous teacher's training and qualifications can take the first of the three years required in three summer courses of six weeks each instead of in a regular winter course.

Details of Course

All instruction in Agriculture is given in Manitoba Agricultural College, in affiliation with the University, and all matters connected with the admission of students, their classification, discipline, examinations, promotion, etc., are closely under the surveillance of the president and Faculty of the College, subject in a general way to University jurisdiction.

All students proceeding to the degree will be required to spend the two summers between the Third and Fifth Years at practical or experimental work under the direction of the Farm Practice Committee of the College Faculty. It is highly important that graduates be proficient, not only in the science of Agriculture, but also in the practice. They must be able to do what is needed to be done about a Manitoba farm, or in the particular branch of work selected as a specialty.

Commencing with the Fourth Year, the candidate for the degree is allowed to specialize in any one of the following courses:

1. Field and Animal Husbandry.
2. Dairy Husbandry.
3. Horticulture and Forestry.
4. Agricultural Engineering.

Course No. 1 above is the main course and is elected by the largest number of students. Candidates for the degree in the "Teachers' Course" must take No. 1, since it offers the best all-round training in the science of agriculture. Classes in any of the other special courses will be given only in case at least four students elect to take them.

First and Second Years

(See Calendar of Manitoba Agricultural College)

The work of these two years is that of the first two years of the three-year Diploma Course of Manitoba Agricultural College, which is designed to meet the requirements of young farmers who are desirous of improving their general education and learning scientific methods of agriculture. During the First Year much time is devoted to the study of principles; in the Second and Third Years a more extended application of these to various phases of work on the farm is made. A student is permitted to proceed with the Degree Course in Agriculture only in case he has shown special ability in the first two years; otherwise, he must complete the three-year Diploma Course first.

Third Year

Animal and Field Husbandry Course

(Taken by all students entering by way of the diploma course*)

	Credits		Credits
Engineering	200	Physics	300
English	400	Mathematics	200
Botany and Biology	500	Agricultural Economics	200
Horticulture and Entomology	500	Veterinary Science	300
Chemistry	600		

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*Students who intend to qualify as teachers, and who already have a First-Class Teacher's certificate or its equivalent, take in the first year of their course a special program, as outlined below, covering that part of the work of the first, second and third years in the full degree course not already taken by them in preparation for their teachers' certificates. The second and third years of the Teachers' Course coincide with the fourth and fifth years of the ordinary degree course.

	Credits		Credits
Agricultural Engineering	600	Botany and Biology	500
Animal Husbandry	800	Chemistry	600
Dairy Husbandry	400	Poultry Husbandry	300
Field Husbandry	700	Veterinary Science	700
Horticulture and Entomology	800		

It is impossible to cover all this work in one winter session, so that it is necessary to supplement it with at least one summer course. The College reserves the right to determine what work the student shall be engaged in during the intervening summers.

Fourth Year

Animal and Field Husbandry Course

	Credits		Credits
Animal Husbandry	400	Horticulture and Entomology	300
Field Husbandry	200	Chemistry	400
Engineering	400	Bacteriology	500
English	300	Physics	200
Botany and Biology	200	Agricultural Economics	200

Dairy Husbandry Course

Dairying	1400	Dairy Bacteriology	200
Engineering	200	Chemistry	200
Animal Husbandry	400	Economics	200
Fodder Crops	200	English	300

Horticulture and Forestry Course

Field Husbandry	200	Drainage and Irrigation	200
Horticulture	300	English	300
Forestry	300	Entomology	300
Bacteriology	300	Plant Physiology and Histology	100
Botany	200	Plant Pathology	200
Chemistry of Insecticides and Fungicides	200	Economics	200

Agricultural Engineering Course

Mechanical Engineering	300	English	300
Agricultural Economics	200	Mathematics	500
Chemistry	400	Physics	200
Drainage and Surveying	400	Shop Practice	400
Drawing	200		

Fifth Year

Animal and Field Husbandry Course

Animal Husbandry	400	English	300
Field Husbandry	600	Agricultural Economics	400
Dairy	300	Principles of Teaching	200
Poultry	300	Option	400

Dairy Husbandry Course

Animal Husbandry	300	Dairy Chemistry	300
Field Husbandry	200	English	300
Dairy Principles and Practice	1600	Principles of Teaching	200
Agricultural Economics	200		

Fifth Year—Continued

Horticulture and Forestry Course

	Credits		Credits
Horticulture	400	Botany of Grasses	100
Chemistry	200	Bacteriology	200
Entomology	300	Economics	200
Plant Breeding	200	English	300
Plant Pathology	100	Principles of Teaching	200
Cultivated Plants	100	Refrigeration and Cold Storage	200
Commercial Botany	100	Soils	200
Botany of Forest	200		

Agricultural Engineering Course

Engineering—		Chemistry	200
Civil Engineering	200	Electricity	200
Mech. of Engineering	200	Economics	200
Trigonometry	100	English	300
Farm Machinery	200	Principles of Teaching	200
Concrete	200	Seminar	100
Mechanical Drawing	300		
Shop Work	300		

For details as to the content of the above courses see the calendar of Manitoba Agricultural College. Copies may be obtained from Professor G. A. Sproule, Registrar.

CURRICULUM IN HOME ECONOMICS

The University of Manitoba confers a degree in Home Economics, viz., Bachelor of Home Economics (B.H.Ec.). The following are the requisites for proceeding in course to this degree:

BACHELOR OF HOME ECONOMICS

The course for the degree of Bachelor of Home Economics extends over a period of five years. It is only during the last three, however, that the student is definitely regarded as a candidate for the degree. The student applying for admission to the Third Year, which is the first definitely belonging to the degree course, must have completed the two-year Home-makers' Course of the Manitoba Agricultural College, or its equivalent, and must have obtained in her Second Year 65 per cent. on her work in English, and a general proficiency standing of 60 per cent. She must also satisfy the Faculty of the Agricultural College of her ability to proceed with advanced work.

A College regulation requires attendance at 90 per cent. of the lectures, and practical work in a subject before a student is permitted to go up for examination in that subject.

The pass mark is 50 per cent. in each subject (with a maximum of three failures allowed) and 65 per cent. on the aggregate of the marks on all subjects.

The course, as at present outlined, is as follows:

Third Year

	Credits
Household Art—	
Advanced Dressmaking	200
History of Costume	100
Home Furnishing	200
Millinery	100
Household Science—	
Book Reviews	100
Foods	100
History of Home Life	100
Household Management	100

	Credits
Biology	300
Chemistry	400
English	400
History	200
Physics	300
Mathematics	200
Physical Culture	100

Fourth Year

Household Art (Major)—	
Clothing	200
Costume Design	100
History of Art	100
Theory and Practice Teaching	200
Household Art (Minor)—	
Dressmaking	200
Household Science (Major)—	
Dietetics	200
Economics cf the Household	200
Invalid Cookery	200

Household Science (Minor)—	
Invalid Cookery	200
Bacteriology	400
Biology	200
Chemistry	300
English and History	400
Physics	200
Physical Culture	100
Economics	200
Demonstrations	200

Students will take a major in Household Art and a minor in Household Science or *vice versa.*

Fifth Year

	Credits
English	400
Economics and Rural Sociology	400
Chemistry	200
Household Art (Major)—	
Clothing	400
Millinery	100
Arts	100
Teaching Methods	200
Household Art (Minor)—	
Clothing	200
Teaching Methods	200

	Credits
Household Science (Major)—	
Dietetics	200
Economics of the Household	200
Equipment and Courses	200
Teaching Methods	200
Household Science (Minor)—	
Equipment and Courses	200
Teaching Methods	200

Students will take a major in Household Science and a minor in Household Art or *vice versa.*

For details as to the contents of the above courses see the calendar of Manitoba Agricultural College. Copies may be obtained from Professor G. A. Sproule, Registrar.

By a recent decision of the University Council it will in future be possible to proceed to the degree of

BACHELOR OF ARTS

by taking the course outlined below, the outstanding feature of which is the combination, in the Third and Fourth Years, of work in Arts, taken at the University or one of its affiliated Arts Colleges in Winnipeg, and of work in Home Economics, taken at Manitoba Agricultural College.

MATRICULATION

The matriculation for the course leading to the degree of Bachelor of Arts with the Home Economics option is the same as for any other course leading to the degree of Bachelor of Arts, for which see pages 23-32.

UNDERGRADUATE COURSE

After having matriculated, the student of Arts and Home Economics is required to pass four examinations before being admitted to the degree of Bachelor of Arts, viz., the First Year, the Second Year, the Third Year and the Fourth Year examinations.

First Year

			Fall Term		Spring Term	
Course Nos.	Page	SUBJECT	Lecture Hours per week	Lab. Hours per week	Lecture Hours per week	Lab. Hours per week
9,10,11,12,	52	English	4		4	
1; 4	72	Mathematics	4		4	
	37	A Foreign Language	4		4	
1,2; 3, 4	77	Physics	3	2	3	2
1, 2; 21, 22	83	Chemistry	4	3	4	3

Second Year

Course Nos.	Page	SUBJECT	Fall Term Lecture Hours per week	Fall Term Lab. Hours per week	Spring Term Lecture Hours per week	Spring Term Lab Hours per week
13,14;15,16	52-53	English	4		4	
	38	A Foreign Language	4		4	
3, 4	67	History	3		3	
1, 2; 3a, 4a	79	Botany	2	2	2	2
1, 2, 3, 4	89	Zoology	2	2	2	2
7, 8; 33, 34	83-84	Chemistry	2	*	2	

Third and Fourth Years

After having completed the First and Second Years, as outlined above, the student will select, for the Third and Fourth Years, a *major* or two *minors*‡ from the following list, to be taken along with a *major* in Home Economics in each year, viz., Classical Greek (major and minor), Latin (major and minor), English (major and minor), French (major and minor), German (major and minor), Philosophy (major and minor), History (major and minor), Political Economy (major and minor).

For details as to the content of the above courses consult the outlines given under the various departmental captions, following the indication as to pages given below:

Subjects	Courses into Which They Enter	Pages
Classical Greek	Major, Minor	45-46
Latin	Major, Minor	48-49
English	Major, Minor	51-55
French	Major, Minor	55-57
German	Major, Minor	57-59
Philosophy	Major, Minor	59-60
History	Major, Minor	66-68
Political Economy	Major, Minor	69-71
Home Economics	Major	148-149

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* An adaptation of Courses 33, 34 will be made and the laboratory time demanded will be later determined.

‡ In the Fourth Year the student who elects Plan A for the major in Home Economics should not take two *minors* in Arts but only a *major*.

EXAMINATION FOR DENTAL LICENSE

Under an amendment to the Manitoba Dental Association Act passed by the Provincial Legislature at its 1916 session, the University of Manitoba became "the sole examining body in dentistry" in the Province and preliminary legal steps were taken to enable the Manitoba Dental Association, either by itself or in conjunction with the University, to establish and conduct a school of dentistry.

The following are the clauses of the amended Act touching the matters in question:

AN ACT RESPECTING THE DENTAL ASSOCIATION OF MANITOBA

(R.S.M., 1913, Cap. 53, Amended March 10th, 1916)

* * * * *

16. The board shall also have power and authority to fix and determine the period for which every student shall attend some school of dentistry approved of by the board of directors and the period for which he shall be articled and employed under some duly licensed and registered practitioner, and to fix and determine the fees to be paid into the hands of the treasurer of the association before the applicant shall receive a certificate of license to practise the profession of dentistry or be entited to registration under this Act, and also to fix the annual fee to be payable by each member of the association.

(*a*) The board of directors of said association shall have power, subject to the approval of the Lieutenant-Governor-in-Council, by itself or in conjunction with the University of Manitoba to establish and conduct a school of dentistry.

17. Every student prior to entering into articles of indenture with a licentiate of dentistry shall furnish a certificate from the University of Manitoba that he has passed the matriculation examination in the Arts Faculty of the University of Manitoba, or that he has an academic standing which, in the opinion of the council of the University of Manitoba, is equivalent thereto. The commencement of the term of any articled student shall date from the signing of his articles as aforesaid; provided that the council of the University of Manitoba may grant said certificate without requiring the student to pass said matriculation examination, if such student has been practising operative dentistry during the past ten years under the supervision of and under the direction of a duly qualified dentist.

18. The University of Manitoba shall be the sole examining body in dentistry in this Province, and the council of the University shall have power from time to time to grant to any person a certificate under the seal of the University that the council of the University have been satisfied that the person mentioned in the certificate is, by way of dental education and otherwise, a proper person to be registered under this Act; but such certificate shall not be granted until the person making such application shall have given such evidence of qualification, by undergoing an examination or examinations or otherwise, as the University may require, and the applicant shall in all other respects first comply with the rules and regulations of the University in that behalf.

(*b*) A candidate for admission to study shall be required to pass the matriculation examination in the Arts Faculty of the University of Manitoba, or to have an academic standing which, in the opinion of the council of the University of Manitoba, is equivalent thereto.

(*c*) Except as hereinafter provided every person before being permitted to practice shall be required to pass an examination or examinations in the following subjects: Histology, dental anatomy, anatomy, chemistry, metallurgy, physiology, materia medica, therapeutics, dental pathology, dental medicine and surgery, operative dentistry, prosthetic dentistry and orthodontia, anaesthetics and bacteriology, ethics and jurisprudence, and such other subjects as may from time to time be substituted for or be added to the foregoing by the council of the University of Manitoba, and to perform operations before the examiners, to exhibit specimens of his skill as a prosthetic dentist, and if called upon to construct practical cases in the presence of an examiner.

19. Examination of candidates for admission to study or to practise the profession of dentistry in the Province of Manitoba shall be held at such times as shall be fixed by the council of the University of Manitoba from time to time.

(*a*) Every person desirous of being examined shall, on or before a date prior to such examination, to be fixed by the council of the University, pay to the registrar of the University the required fees, and furnish him with satisfactory evidence of his right to take the examinations, and of his integrity and good morals, and in case of a candidate for admission to practise with satisfactory evidence that his term of indentureship has been fulfilled.

(*b*) The council of the University of Manitoba may from time to time, upon such terms as the council shall from time to time determine, grant to graduates, under-graduates or members of such dental schools, colleges or associations as the council shall from time to time determine to recognize such standing as to said council shall seem just.

(*c*) Notwithstanding anything herein contained a graduate in dentistry of any University or College recognized from time to time by the board shall, on presenting his diploma and testimony of good character and conduct to the board, receive, on payment of such fees as shall be fixed by the board, a permit to practise as an operator in dental surgery, and as a practitioner in dentistry in the office of and under the supervision of a person duly qualified to practise dentistry in Manitoba under this Act, but such permit shall not in any event extend beyond the time of the final examination held within one year from the date of said permit and shall not be renewed thereafter, provided that if such graduate is not now a resident of Manitoba he shall have graduated and received his diploma from such recognized University or College, since the first day of January, A.D. 1913.

In exercise of the powers conferred by the legislation above outlined the Council of the University has authorized two examinations for Dental License in each year, in the months of January and of June respectively.

The subjects enumerated above in the Act as the subjects required for admission to license, are grouped for examination purposes as follows:

Part I.

1. Anatomy.
2. Chemistry and Metallurgy.
3. Physiology and Histology.

Part II.

4. Materia Medica and Therapeutics.
5. Bacteriology and Pathology.
6. Dental Medicine and Surgery, including Anaesthetics.
7. Operative Dentistry.
8. Prosthetics.
9. Orthodontia.
10. Ethics and Jurisprudence.

A minimum of 50 per cent. is required on each written paper with a minimum of 60 per cent. on the aggregate of all the written papers, and on each practical examination.

Students qualifying for examination by service under articles of indenture, with a licentiate of dentistry, may take Part I. of the examination, as indicated above, after the completion of two years of service, and Part II. at the end of four years of service. Students writing Part I. only may fail on one paper and have the privilege of supplemental examination; those writing Part II. only may fail on two papers and have the privilege of supplemental examination; candidates writing the whole examination may fail on three papers and have the privilege of supplemental examination; candidates failing on a larger number of papers than the above must repeat the entire examination.

Application for examination should be made in writing to the Registrar at least two weeks in advance of the opening of the same, on a blank form that will be supplied for the purpose. A fee of $10.00 for Part I., $15.00 for Part II. or $25.00 for the whole examination is required, payable at the time the application is made. This is distinct altogether from any registration or admission fees that may be required by the board of the Dental Association.

21-22

EXAMINATION FOR NURSES' REGISTRATION

AND FOR

ADMISSION TO "THE MANITOBA ASSOCIATION OF GRADUATE NURSES."

Under the terms of an Act respecting "The Manitoba Association of Graduate Nurses," (3 Geo. V., Cap. 114), passed by the Legislature of the Province in 1913, an association bearing the above name was incorporated for the purpose of maintaining a certain standard of qualification among those practising the profession of nursing the sick. The University of Manitoba was at the same time appointed to conduct the examination of applicants for admission.

Provision was made in the Act for the admission without examination up to July 1st, 1916, of all who had been engaged in nursing in the Province for a year prior to the date on which it came into force, viz., February 15th, 1913.

Other persons, not entitled to be registered under the above provision, but who have completed a regular course of training of at least three years in a recognized hospital or training school, may be admitted to membership in the Association on passing an examination as outlined below, conducted by the University of Manitoba, and on complying with such requirements as to application, payment of admission fee, etc., as may be laid down by the by-laws of the Association.

The next of these examinations will be held in Winnipeg, in June 1922. It will be (*a*) written, (*b*) oral and practical.

The examination will be independent of any text book, but the following are suggested for the guidance of prospective candidates in their reading:

1. *Medical Nursing, including Materia Medica*—

Robb, Isabel Adams Hampton—"Nursing—Its Principles and Practice." (C. C. Kaechert, Cleveland, Ohio.)

Dock, Lavinia L.—"A Textbook of Materia Medica." (G. P. Putnam & Sons.)

Paul, George P.—"A Textbook of Materia Medica for Nurses, including Therapeutics and Toxicology." (W. B. Saunders.)

2. *Surgical Nursing, including Operative Technique and Gynaecological Nursing.*

Kimber, Diana Clifford—"Anatomy and Physiology for Nurses." (New and revised edition—Macmillan Co.)

Fowler, Russell S.—"The Operating Room and the Patient." (W. B. Saunders.)

3. *Obstetrical Nursing* (at least seven cases)—

DeLee, Joseph B.—"Obstetrics for Nurses." (Saunders.)

4. *Diseases of Children.*

Holt, L. Emmett—"The Care and Feeding of Children."

5. *Contagious Diseases.*

6. *Dietetics*—

Pattee, Adlida Frances—"Practical Dietetics with Reference to Diet in Disease."

General Reference Books and Miscellaneous Texts—

Maxwell, Anna Caroline, and Pope, Amy Elizabeth—"A Textbook for Nurses and a Handbook for All Who Care for the Sick." (G. P. Putnam & Sons.)

Gould, George M.—"Practical Medical Dictionary."

Gould, George M., and Pyle, Walter L.—"A Cyclopedia of Practical Medicine and Surgery."

Hughes—"Practice of Medicine."

Stevens—"Practice of Medicine."

"Manhattan Eye, Ear, Nose and Throat." (W. B. Saunders.)

Application for examination should be made to the University and the required fee of $8.00 paid not later than June 1st. Blank forms of application may be obtained from the Registrar.

EVENING COMMERCIAL COURSES

Under the direction of an Advisory Committee composed of representatives of various business interests, the Council of the University has instituted Evening Courses in Commerce. These courses are open to both men and women, and are designed to meet the needs of those who desire to improve their qualifications for business positions. Civil Service students and those preparing for the examinations of the Institute of Chartered Accountants will find these classes especially useful.

Courses are offered in Accountancy, Commercial Law, Business English and Business Arithmetic. A brief outline of the topics discussed in each course is given below. The evening on which each class meets will be announced before the opening of the University session.

Accounting I. Fundamental principles of Accounting. Single entry bookkeeping; ascertaining profit or loss in single entry. Principles of double entry. Classification of accounts; value of correct analysis. Functions of the ledger; different forms of ledger rulings; advantages and disadvantages of loose-leaf and card ledgers. Trial balances; closing the books; preparation of profit and loss statements and balance sheets. Partnerships; division of profits in partnerships; transferring business to partnership; loans from partners; opening partnership books; closing partnership books; liquidating a partnership. Realization and liquidation accounts. Subdivision of ledgers and books of original entry. Trade and cash discounts. Notes receivable and payable. Controlling accounts. Consignments. Averaging accounts.

Admission to this course will be accorded to all students who, in the opinion of the lecturer, have had a sufficient training in bookkeeping to enable them to derive benefit from the course. Twenty-four lectures with home assignments. Lecturer, W. D. Love, B.A., C.A.

Accounting II. Accounting I and II together form a two-year course suitable for students desiring a thorough knowledge of Accounting for general business, as well as preparing students for the Accounting papers of the Intermediate Examination of the Institute of Chartered Accountants.

Attendance at Accounting I is, therefore, a pre-requisite to admission to Accounting II.

Advantages and disadvantages of Limited Companies. Transfer of partnership to limited company. Accounts of a limited company. Manufacturing accounts. Elements of cost accounts. Agencies and branches. Revenue accounts. Special topics such as: Patents, Goodwill, Depreciation, Deferred Charges, Reserves, Dividends, Donated Stock, Bonds and Sinking Funds. Twenty-four lectures with home assignments. Lecturer, John Parton, C.A.

Accounting III. (Open only to registered students of the Institute of Chartered Accountants of Manitoba who have passed the intermediate Examination). A course in higher accounting in preparation for the Final Examination of the Institute of Chartered Accountants. Twenty-four lectures with home assignments. Lecturer, John Parton, C.A.

Auditing I. This course is open only to students of the Institute of Chartered Accountants and is designed to meet the needs of those preparing for the Intermediate Examination. Fifteen lectures. Lecturer, A. J. J. Fanshaw, C.A.

Auditing II. This course is open only to students of the Institute of Chartered Acountants and is designed to meet the needs of those preparing for the Final Examination. Fifteen lectures. Lecturer, B. F. Griggs, C.A.

Commercial Law I. A course in general business law, with special reference to the following:Sale of Goods Act; Bills of Exchange Act; Partnership Act; Joint Stock Companies Acts (Dominion and Manitoba); general law of agency; law relating to banks and banking; suretyship; trustees and executors. Twenty lectures. Lecturer, Lorne J. Elliott, LL.B.

Commercial Law II. A further course in general business law, with particular reference to the following: Assignments and Preferences Act; judgments and executions; bills of sale and chattel mortgages; liens; Bulk Sales Act; transfers of real estate and mortgages; Bankruptcy Act. Twenty lectures. Lecturer, Edwin Loftus, M.A., LL.B., K.C.

Business English. A course of lectures on the general subject of "English for Business." The following topics will be treated:The Scope of Business English; the Sentence; the Business Letter; Originality in Business Literature; the Paragraph; Booklet Writing and Reports; Vocabulary Building;Salesmanship and Correspondence; Efficiency Tests in Correspondence; the English of Advertising; English in Business Conversation; Classes of Letters; Figures of Speech; Grammar for the Business Man; Follow-up Methods and the Form Paragraph; the Correspondent and Business Routine; the English of Journalism; Building Business by Correspondence; Correspondence Supervision. Eighteen lectures with home assignments. Lecturer, H. J. Russell, F.C.I.

Business Arithmetic. The subjects treated include: Percentage; trade discount; profit and loss; commission and brokerage; simple and compound interest; simple cases of annuities and sinking funds; bank discount; present value and true discount; partial payments; taxes; insurance; stocks and bonds; exchange; duties; equation of payments and accounts; partnership. Twenty lectures with home assignments. Lecturer, L. A. H. Warren, M.A., Ph.D.

FEES

The following fees will be charged:

Accounting I	$10.00
Accounting II	15.00
Accounting III	15.00
Auditing I	10.00
Auditing II	12.50
Commercial Law I	10.00
Commercial Law II	12.50
Business English	5.00
Business Arithmetic	5.00

The above fees are for single courses. A discount will be given to students taking two or three courses concurrently. Students with a record of overseas service will be accorded a remission of one-half the regular fees.

SOCIAL WELFARE COURSES

Courses in Social Welfare work are arranged from year to year. The following were given during the session 1920-1921.

1. **Economics.** A general outline, with special reference throughout to practical current problems. Eighteen lectures, one per week before and after Christmas.

2. **Psychology.** A general outline. Nine lectures, before Christmas.

3. **Mental Hygiene.** Nine lectures after Christmas, one per week.

4. **Social Work and Social Progress.** Nine lectures before Christmas, one per week.

5. **Child Welfare.** Nine lectures after Christmas, one per week.

Details as to courses offered in 1921-1922 will be announced by the Registrar.

U of M Calendar 1921-22

GENERAL REGULATIONS

REGISTRATION

The 1921-1922 session begins on Tuesday, September 13th, and lectures in Arts, Science, Medicine, Engineering, Architecture and Pharmacy open on Wednesday, September 14th.

Students who present themselves for registration at the Registrar's Office of the University later than 5 o'clock p.m., on Thursday, September 15th, will be required to pay the sum of $2.00 in addition to their tuition fee, or, in case all their classes are taken in an affiliated college will be subjected to a fine of $2.00.

No registration will be accepted after Monday, October 3rd, unless the Board of Studies on investigation finds that a special concession is warranted.

The dates for the registration of extra-mural students are the same as those for students in attendance, and the same regulations apply, except that extra-mural students are not required to register in person, but may do so by mail.

All undergraduates in Law must present certificates of registration from the University before registering in the Manitoba Law School.

EXAMINATIONS

General Regulations

1. The regular examinations for undergraduates in Arts, Science, Engineering, Architecture and Pharmacy are given in part in December and in part in April of each academic year. The same applies to subjects of the First Year in Medicine taught in the University. All other regular examinations are given in April only. For definite information as to the work upon which each of these sets of examinations is based, the student is referred to the curricula of the various years as set forth elsewhere in this Calendar.

2. Examinations in Arts may be held at such outside centres in Manitoba, Saskatchewan, Alberta and British Columbia, as the Board of Studies may from time to time approve of; it being understood that this does not apply to practical examinations, where such are required.

Matriculation Examinations

1. The Examinations for Matriculation into all Faculties are held twice in each year, in the months of June and September.

2. The examinations in June are conducted by the Department of Education of Manitoba for the University, concurrently with its own examinations for Teachers' Certificates, and insofar as the requirements for the two courses correspond, the two groups of candidates write upon the same papers. The University determines its requirements for entrance and its standards of examination, the joint examiners are appointed by mutual agreement, and the Matriculation examination results are submitted to the Board of Studies, which determines whether each candidate passes or fails and, in case he passes, determines his grading.

These examinations are held in Winnipeg and at a large number of outside points in the province.

In addition, the June Matriculation Examinations are held by the

University on request at such points putside of Manitoba as may from time to time be approved by the Board of Studies.

3. The September Matriculation Examination is held at the University in Winnipeg only.

Credit for Term Work.

1. At the close of each term the instructors in Arts in the University and the affiliated colleges may make a report on the work of each student for the term just closing in the form of an award of marks, to be based upon the results of recitations, reports, essays, papers or interim examinations, or a combination of any number or of all of these tests, as indicating the character of the work throughout the term. The maximum credit allowed for term work in such a report shall be 20 per cent. of the total marks allowed for the subject or portion of the subject in question.

2. On the acceptance of the report of the instructor, the marks given for term work are added to the marks obtained at the written examination in the subject (for which the maximum shall be 80 per cent. of the total marks allowed for the subject or portion of the subject in question), and this total shall determine the standing of the student.

3. In case the instructor submits no report, or his report is not accepted by the Board of Studies for any reason, the standing of the student is determined entirely by the final written examination, which will be valued on the basis of the total marks allowed for the subject or portion of the subject in question.

4. In any case, the award of scholarships and medals is made entirely on the results of the final written examinations.

5. The marks for term work will be reported to the student by the Registrar when the marks given for his written examination are announced, but not before.

Failures and Supplementals.

1. For information regarding Matriculation failures and supplementals see pages 23 and 24.

2. An undergraduate student in Arts, Science, Engineering, Architecture or Pharmacy who has failed on any paper or papers at the December examinations may proceed with the work of the second term and may remove the condition or conditions at a supplemental examination given in April before the regular April examinations, and the mark or marks obtained at this supplemental examination will, if higher, replace the original mark or marks in computing the aggregate of the student for the year.

3. A student of the First or Second Years in Arts or Science or Senior Matriculation for Medicine or Engineering, who, at the close of the April examinations, has not more than six conditions against him, is granted standing for the year, with supplementals, provided his aggregate is at least 40 per cent. of the total maximum marks assigned to all subjects of his course.

4. In the case of examinations of the First and Second Years in Arts or Senior Matriculation for Medicine or Engineering, where the candidates are given hour-and-a-half papers in some subjects and three-hour papers in other subjects, the hour-and-a-half paper is the unit in determining failures. A failure in a three-hour paper is reckoned as two failures, unless the examiners recommend otherwise. Students are required to pass in both the term essay work and final term examination in the subject of English Prose and Composition.

5. A student taking one of the special group courses of the Third or Fourth Years in Arts, has his standing for the year determined by the combined results of the December and April examinations (supplemental and regular). He must obtain 40 per cent. of the aggregate of the marks allowed for each *major* or *minor* subject, in order to obtain standing in that subject; and as well 40 per cent. of the aggregate of the marks allowed for all subjects of his course in order to obtain standing on the course. Having failed to obtain 40 per cent. of the aggregate of the marks in any subject, he is required to repeat all the examinations in that subject as supplemental examinations. Having failed to obtain 40 per cent. of the aggregate of the marks in all subjects of the course, or having failed to obtain the pass mark in more than three papers, he is required to repeat all the examinations of the year at the regular examinations of a subsequent session. A student who has obtained at least 40 per cent. of the aggregate of the marks in all subjects of his course, and, as well, at least 40 per cent. of the aggregate of the marks in each subject of his course, and has failures registered against him in not more than three papers of the two examinations, is granted standing but is required to take supplemental examinations in the paper or papers in which he has still failed to secure the pass mark.

6. A student taking any other special course, or the General Course of the Third or Fourth Year in Arts or the Third or Fourth Year in Science, has his standing for the year determined by the combined results of the December and April Examinations (supplemental and regular). In order to secure a pass he must obtain at least 40 per cent. of the aggregate of the marks allowed for all examinations of his course, and may not, at the close of the April examinations, have more than three conditions registered against him (a failure on an hour-and-a-half paper operating to create only a half condition).

7. The pass in all undergraduate subjects in Arts is 40 per cent., both for extra-mural and intra-mural students.

8. Students in Engineering and Architecture, and in the First Year in Medicine have their standing for the year determined by the combined results of the December and April examinations. In order to secure a pass they must obtain at least 50 per cent. of the aggregate of the marks allowed for all examinations of their course. The conditions under which students will be allowed to proceed with the work of the second term, and the number of failures in individual papers that a student may make and yet be allowed standing on the combined results of the December and April examinations, with the privilege of supplementals, will be determined by the Board of Studies each year when the number of papers to be set by the examiners is definitely known.

9. Students of the Second, Third, Fourth and Fifth Years in Medicine and of all years in Law are examined only in April, and are granted standing provided they have failed in not more than two papers of the examination and have obtained at least 50 per cent. of the aggregate of the marks allowed for all papers of the examination, being required to take supplemental examinations in the papers in which they have failed.

10. The pass mark in all undergraduate subjects in Engineering and Medicine is 50 per cent. The pass mark is all professional subjects in Architecture is 50 per cent.; in other subjects 50 per cent. where they are given by the Engineering Faculty and 40 per cent. where they are given by the Arts Faculty.

11. The pass mark in all undergraduate subjects in Law is 40 per cent.

12. A student of the Diploma Course in Pharmacy, who, at the close of the April examinations, has not more than three conditions against him, is granted standing for the year, with supplementals, provided his aggregate is at least 60 per cent. of the total maximum marks assigned to all subjects of his course.

13. The pass mark in all professional subjects in Pharmacy is 60 per cent.; in the remaining subjects of the course 50 per cent.

14. The April Supplemental Examinations begin on the third Monday of the month and the September Supplemental Examinations begin on the first Thursday of the month, and run concurrently with the September Matriculation Examinations. For them, as for all other supplemental and special examinations, application should be made at least fifteen days in advance and on blank forms intended for the purpose, to be obtained from the Registrar.

15. The ordinary scale* of fees for Supplemental Examinations is as follows: One full paper (three hours), $6.00; two full papers, $7.00; three or more full papers, $8.00; one half-paper (one and a half hours), $3.00; 50 cents for each additional half-paper.

16. In all cases, students who are required to take a supplemental examination and who fail to present themselves for the same at the September examination following the regular examination at which the original failure was made, must, when they present themselves for examination at a later date, accommodate themselves to any changes in the curriculum that may have been made in the meantime.

17. A condition in any subject may also be removed by writing upon the paper provided in the subject in question at any regular examination where such paper is examined. In such a case the supplemental examination fee is required from the candidate whether or not he has paid at the same time the regular examination fee. He should also make application therefor on a special form provided for such cases by the Registrar.

18. September Supplemental Examinations are held at the University, and also at such outside centres in Manitoba, Saskatchewan, Alberta and British Columbia as the Board of Studies may from time to time approve.

Conditions of Examination

1. Candidates for any supplemental or special examination should at least fifteen days before the date of the examination, make suitable application to the Registrar, from whom blank forms of application may be obtained. The required fee must accompany the application. The fee for a regular examination is payable (along with the tuition fee, if such is required) at the time of registration for class work.

2. (*a*) No student in Arts who has registered with an affiliated college shall be entitled to present himself at any regular University examination within the academic year in which he has so registered without the written consent and approval of the head or acting head of the college in which he is registered.

(*b*) No student in Arts who has registered only in the University shall be entitled to present himself at any regular University examination within the academic year in which he has so registered, without the written consent and approval of the Chairman of the University Faculty of Arts and Sciences.

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*In the case of examinations of the First and Second Years in Arts and Science, and of Senior Matriculation, the hour-and-a-half paper is employed as the unit throughout, a three-hour paper counting as two units. $3.00 is charged for the first hour-and-a-half unit, and 50 cents for each additional hour-and-a-half unit, whether of half or full papers up to a maximum of $8.00.

3. No one shall be permitted to present himself as an extra-mural student at any University examination in Arts above Matriculation without giving notice to the Registrar, and without receiving permission from the Board of Studies to appear as an extra-mural student.

4. Every extra-mural candidate at any examination shall, along with his application for examination, forward to the Registrar a certificate from some trustworthy person, that he is of good moral character.

Appeals.

1. Any candidate is at liberty to enter an appeal, within three weeks after the publication of the examination results in the public press, against the standing assigned him by the examiners and to request a revision of the marking of one or more of his papers.

2. The fee for such revision is $2.00 for each paper. This fee is payable at the time the appeal is made, and in case the revision takes place, is not returnable, whether the original marking is sustained or not. When the revision is not granted the fee is returnable.

3. There is no special form of application for such revision.

Conditioned Students

1. Candidates for matriculation into the Faculties of Arts, Science, Engineering and Architecture who have failed in not more than two papers, or, having failed in three, have at a subsequent supplemental examination, passed in at least one of them, may, as conditioned students, proceed with their course with the view of subsequently obtaining full undergraduate standing. This regulation is subject to the limitations laid down in 3 below.

2. Candidates with undergraduate standing in Arts, Science, Law, Engineering and Architecture who have failed on not more than two papers at the First, the Second or the Third Year examinations, or who, having failed on more than two, have at a subsequent supplemental examination, reduced the number of their conditions to two, may as conditioned students proceed with their course with the view of subsequently obtaining full standing in their year. This regulation is subject to the limitations laid down in 3 below.

3. The following limitations are placed on the application of regulations 1 and 2 above:

(a) Matriculation conditions must be removed before the commencement of the Second Year, First Year conditions before the commencement of the Third Year, and Second Year conditions before the commencement of the Fourth Year.

(b) A student who, by virtue of regulations 1 and 2 above, proceeds to any examination with conditions from a previous examination still registered against him, and who at the close of the said examination has more than three conditions against him, while otherwise qualifying for a pass, will not immediately receive standing, but will have the same withheld, until, at a subsequent supplemental examination, he reduces the number of his conditions to such an extent and in such a way as to entitle him to proceed under 3 (a).

Equivalent Examinations

1. Provincial Department of Education examinations are accepted *pro tanto* by the University, in so far as the subjects and standing are, to the satisfaction of the Board of Studies, the same as, or equivalent to, those required by the University—but candidates offering certificates of having passed such examinations are required to pass in such subject or subjects not covered by their certificates, as may, in the opinion of the Board, be necessary for the completion of the examination for partial standing towards which such certificates are presented.

2. (a) The following are accepted *pro tanto* for subjects of Part I. of Arts or Science Matriculation, or Part I. of Junior Matriculation for Medicine or Engineering.

(1) Grade X. Teachers' Examination Certificate, Manitoba.

(2) Third Class Diploma, Saskatchewan, Alberta or British Columbia.

(3) Entrance to Model Schools Certificate, Ontario.

(b) The following are accepted *pro tanto* for subjects of Parts I. and II. of Arts or Science Matriculation or full Junior Matriculation for Medicine or Engineering:

(1) Grade XI. Teachers' Examination Certificate, Manitoba.

(2) Second Class Diploma, Saskatchewan, Alberta or British Columbia.

(3) Entrance to Normal Schools Certificate, Ontario.

(c) The following are accepted *pro tanto* for subjects of First Year in Arts or Science or of Senior Matriculation for Medicine or Engineering:

(1) Grade XII. Teachers' Examination Certificate, Manitoba.

(2) First Class Diploma, Saskatchewan, Alberta or British Columbia.

(3) Entrance to Faculties of Education Certificate, Ontario.

3. Provincial or Departmental Certificates for any other provinces of the Dominion are granted such *pro tanto* standing as the Board of Studies may from time to time recommend.

4. Candidates presenting *pro tanto* certificates must attempt to pass at one time in all the subjects necessary to the completion of the entire examination.

5. Holders of certificates of educational value, other than those above mentioned, receive such recognition as the Board of Studies may from time to time recommend.

6. Students of recognized colleges, who are matriculated in this University, may pursue their course of study in said college and may come up to the University examinations as students of said college.

Admission Ad Eundem Statum and Ad Eundem Gradum

Members of any other University in His Majesty's Dominions, or of any other University accredited by the University of Manitoba, who may apply for admission to this University, are not required to take the entrance Examination of the Faculty to which they belong, but may be admitted *ad eundem statum* or *ad eundem gradum*, on presentation of their credentials and payment of the required fee.

ATTENDANCE ON LECTURES AND PRACTICAL WORK.

No student who has not been duly registered as an extra-mural student, is allowed to present himself for examination in any subject in which class instruction is given, who does not present from the University Faculty, or from an affiliated college where such work is done in the college, a certificate of having attended 75 per cent. of the lectures delivered in that subject during the term preceding the examinations, in cases where December and April examinations are required, or during the entire session in cases where April examinations only are required.

No student is allowed to present himself for examination in any science subject or in mathematics unless he has satisfactorily carried out and recorded the minimum of practical work in each such subject decided upon by the University Faculties, subject to the approval of the Board of Studies; the scheme of practical work to be announced at the beginning of each session. This regulation applies to all classes of students, whether of Arts, Science, Engineering, Medicine or Pharmacy, doing practical work under the direction of the University Faculties.

Students are permitted to register for extra-mural study of any course in Arts that does not involve practical or laboratory work. The regulations with respect to time of registration, etc., are the same as for students in attendance. Such students take the same examinations as those in the regular classes of instruction of the University or affiliated colleges, and the same time-table applies. Arrangements for local supervision of examinations may be made at the discretion of the Board of Studies.

*PRIZES AND SCHOLARSHIPS

The Prizes and Scholarships hereinafter mentioned are provided from an endowment fund presented to the University under the terms of the will of the late Dr. A. K. Isbister.

*Prizes

Prizes shall be awarded at the June examinations of each year for Part I. Matriculation to pupils of any school, not being an affiliated college, in the Province, as follows:

(a) These prizes to be called Isbister Prizes, shall be five in number of the value of $20.00 each, and shall be awarded to the five candidates standing first on the aggregate of the marks of all papers on the fixed subjects of Part I. of the Matriculation Examination for Arts, Science or Law of the University of Manitoba, or on the corresponding subjects of Part I. of the Junior Matriculation for Medicine or Engineering.

One of these prizes shall be awarded to French-speaking students. In the event, however, of no French-speaking student qualifying for a prize, all five prizes may be awarded to English-speaking candidates.

(b) The winner of each of these prizes must send in to the Registrar of the University a certificate of his having been in attendance at a public or private school, not being an affiliated college, in the Province of Manitoba, for the greater part of the preceding school year.

SCHOLARSHIPS

Scholarships shall be awarded as follows:

Matriculation for Arts and Science and Junior Matriculation for Law, Medicine and Engineering

Five Scholarships of $100.00 each on aggregate of entire Grade XI Examinations.

Arts, Science and Senior Matriculation

First Year

Eleven Scholarships of $100.00 each on the aggregate of the entire examination of the year, as follows: Six in Arts; two in Senior Matriculation for Medicine; two in Senior Matriculation for Engineering; one in Science. Two Scholarships of $50.00 each in Latin Philosophy as follows: One for English-speaking students and one for French-speaking students.

Second Year

Six Scholarships of $100.00 each on the aggregate of the entire examination of the year, as follows: Five in Arts; one in Science. Two Scholarships of $50.00 each in Latin Philosophy as follows: One for English-speaking students and one for French-speaking students.

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* As the University Council is considering at the time of publication of this calender the question of the withdrawal of these prizes, the Council reserves the right to withdraw them without further notice.

Third Year

Seventeen scholarships of $100.00 each, as follows: One in each of the following courses—General Course; Major Course in Greek, Latin, Hebrew, English, French, German, History, Political Economy; full course in Philosophy, Latin Philosophy and Mathematics: one in each of the four divisions of the Natural and Physical Science Course; one in Science.

Law

Two scholarships of $100.00 each in the First Year and two scholarships of $100.00 each in the Second Year.

Medicine

Twelve scholarships, as follows: One scholarship of $125.00, one scholarship of $100.00 and one scholarship of $75.00 in each of the first four years of the Course.

Engineering

Eight scholarships as follows: One scholarship of $100.00 and one scholarship of $75.00 in each of the following—First Year; Second Year; Third Year Civil Engineering, Third Year Electrical Engineering.

Agriculture

One scholarship of $100.00 in the Third Year and one scholarship of $100.00 in the Fourth Year.

Home Economics

One scholarship of $100.00 in the Third Year and one scholarship of $100.00 in the Fourth Year.

GENERAL CONDITIONS OF ELIGIBILITY TO RECEIVE SCHOLARSHIPS.

1. A student is not qualified to receive a scholarship unless:

(a) He has been ranked above all competitors on the aggregate of the marks in the subject or subjects for which the scholarship is given, or, in cases where more than one scholarship is offered, is one of a group that has been so ranked, or has become eligible through reversion (see below).

(b) He has obtained first-class standing on the aggregate of the marks in the subject or subjects for which the scholarship is given;

(c) And has passed at the same examination* in all the subjects required for the full work of the academic year in which the scholarship is given;

(d) And has removed at the same examination, or prior to it, any condition from a previous year or grade that may have been registered against him.

2. No student may hold more than one scholarship. If a student succeeds in otherwise qualifying for more than one scholarship in any year, he will be allowed to receive but one, and his name will be entered upon the list as having qualified for the other, though not entitled to any of the funds; and such other scholarship will be granted to the one ranking next to him, provided he is otherwise eligible.

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* A failure or failures on December Examinations in undergraduate subjects of the First or Second Year in Arts, on which supplemental examinations are successfully passed in April, will not operate to debar the student concerned from receiving a scholarship, should he otherwise qualify, unless the subject in which the failure occurs be one of the group on which the scholarship is awarded.

A failure or failures on December Examinations in subjects of the First or Second Year in Engineering, on which supplemental examinations are subsequently passed in April, will not operate to debar the student concerned from receiving a scholarship, should he otherwise qualify. In the Third and Fourth Years in Arts or Engineering a failure on a December examination in any subject of the year, will operate to debar the student concerned from receiving a scholarship on that year's work, even if a supplemental examination in the subject in question is later successfully passed.

3. A student is not qualified to receive an Isbister prize at the examination of Part I Matriculation unless—

(a) He has obtained first-class standing on the aggregate of the subjects for which the prize is given;

(b) And has passed at the same examination in all subjects required for the full examination of Part I Matriculation.

CONDITIONS GOVERNING THE PAYMENT OF ISBISTER SCHOLARSHIPS

The general conditions governing the payment of these scholarships are determined by the terms of the will under which the trust was established, from which the following is an excerpt:

> "I desire it to be understood that I establish this trust for the benefit and improvement of education in the Province of Manitoba, and it is my wish that it shall take the form of a general scholarship or prize fund for the encouragement of meritorious students and scholars in the various places of education in the Province for both sexes, from the Common School to the Colleges and Institutions and Private Schools where the highest education is given without any distinction of race, creed, language or nationality. In the Lower Schools this encouragement may take the form of prizes, and in the Higher Schools that of scholarships of sufficient value to maintain or help to maintain the holder at a College or University either in Canada, Great Britain or elsewhere, and I leave the Governing Body of the Manitoba University free to carry out the objects of the trusts now confided to them in the manner which to them may seem best."

The scholarships are paid during the course of the annual session following that at the examinations of which they were won, provided the winners are duly enrolled and regularly in attendance at the University or an affiliated college, upon the full work of the next succeeding year of the degree course they have begun, and payment is made upon the following plan: One moiety on the second Monday in November and one moiety on the second Monday in February, upon receipt by the Bursar of certification as to the award of the scholarship and as to compliance with the above requirements of registration and attendance from the Registrar and the President in the case of students registered for instruction in the University, and from the Registrar of the University and the head of the College in question in the case of students registered for instruction in an affiliated college.

If, for any reason, the winner of a scholarship is not in attendance as an intra-mural student during the academic year next following that in which the scholarship is won, the scholarship will automatically be extended for another year.

If, for any reason, the winner of a scholarship is not in attendance during the two academic years next following that in which the scholarship is won, the scholarship will lapse.

The values stated for the scholarships are the maximum values which the scholarships will not exceed. If the funds do not allow of the scholarships being of such maximum value, then they shall be proportionately of such value as the funds will allow.

AIKINS SCHOLARSHIPS IN THE ENGLISH LANGUAGE AND LITERATURE

Sir James Aikins, Lieutenant-Governor of Manitoba, and formerly for many years a member of the Council of the University and its Honorary Bursar, has established a trust for the purpose of providing annually what are to be known as the Aikins Scholarships in the English Language and Literature. They are to be awarded to the students ranking first at the annual examinations in English of the First Year, the Second Year and the major course of the Third Year respectively, and are to have the same conditions attached as are attached to the Isbister Scholarships with respect to first class standing in the subject, concurrent completion of a full course of study of the year in question and freedom from prior conditions. They will be paid during the next succeeding annual session upon the same plan as that of the Isbister scholarships. The amounts have been fixed for the present at the following:

First Year	$ 75.00
Second Year	75.00
Third Year, major course	125.00

MATRICULATION SCHOLARSHIP IN CHEMISTRY

A scholarship in Chemistry of amount $50.00, has been established by the Chemical Society of Winnipeg for annual award at the examination for Junior Matriculation (Grade XI.), under the same conditions as those outlined for the Isbister Scholarships.

RESEARCH PRIZE IN SCIENCE

A research prize in Science is offered by the Scientific Club of Winnipeg annually for the best piece of research work in science, pure or applied, completed in the year preceding, carried out at the University of Manitoba by an undergraduate or by a graduate of not more than four years standing. The following rules will apply in the awarding of this prize:

1. The prize shall be known as the Research Prize of the Scientific Club of Winnipeg, and shall be of the value of $300.00.

2. The prize shall be awarded at the Convocation Ceremony of May, 1922, for the best piece of research work in Science (pure or applied) carried out by an undergraduate or graduate of the University of Manitoba (excluding *ad eundum* graduates) who shall not have graduated prior to 1918. In the event of a student having proceeded to a subsequent degree or degrees in this University, the date of his last graduation will be chosen for the purpose of this clause.

3. In the event of no work of sufficient merit being submitted, the prize shall be awarded at a later date under conditions to be announced.

4. Candidates shall deposit three copies of published papers or of a full report properly typewritten of the research to be submitted with the Registrar of the University on or before April 1st, 1922.

5. The award will be made by the University Council on the nomination of the Scientific Club of Winnipeg, who shall exact a sufficient standard of merit before making any nomination. The standard of merit aimed at shall be worthiness of acceptance for duly accredited journals devoted to publication of research.

Addendum: The Scientific Club hopes that if the standard of work submitted is of sufficiently high value to justify a continuance of the prize, a further award may be made under similar conditions in 1926.

PRIZE OF THE MANITOBA BRANCH OF THE CANADIAN INSTITUTE OF MINING AND METALLURGY

The Manitoba Branch of the Canadian Institute of Mining and Metallurgy has voted a sum of money not to exceed $100.00 to be presented as a prize to an undergraduate studying Science in the University of

Manitoba for the best paper dealing with a mining subject or a geological subject related to mining. The following rules will apply in the awarding of this prize:

1. The prize will be known as "The Prize of the Manitoba Branch of the Canadian Institute of Mining and Metallurgy."

2. Undergraduates of the University of Manitoba who are studying science are eligible to compete.

3. The prize will be awarded for the best paper dealing with mining or mining geology. Preference will be given to papers based on the results of field work or laboratory research, conducted by the candidate.

4. The prize has a maximum value of $100 which may be reduced at the discretion of the committee in charge to $50. The committee need not make an award if none of the papers submitted is considered of sufficient merit.

(5) Candidates must submit three copies of their paper to the secretary of the Manitoba Branch of the Institute on or before April 1st, 1922, and it is suggested that subjects should be submitted to the committee for approval before commencing work.

THE McMILLAN FELLOWSHIP IN HISTORY AND POLITICAL SCIENCE

A fellowship in History and Political Science of amount $500.00 will be awarded annually to a graduate of the University of Manitoba who has obtained a creditable standing in History and Political Science (including Economics), and who will register for graduate work in this field in the University of Manitoba, or in another approved University. The award will be made by a committee consisting of the Chancellor, the President and four members named by the Board of Governors. Application should be made to the Registrar.

HUDSON'S BAY COMPANY RESEARCH FELLOWSHIP

This Fellowship is offered annually by the Hudson's Bay Company for research in pure or applied science. The following regulations will govern the appointment to this Fellowship:

1. The Fellowship shall be known as the Hudson's Bay Company Research Fellowship, and shall be tenable at the University of Manitoba.

2. An appointment will be made annually, if a suitable candidate is nominated, by the Council of the University of Manitoba, and confirmed by the Governor of the Hudson's Bay Company, for the ten years, 1920-29, inclusive.

3. In the event of no suitable candidate presenting himself, two Fellows may be appointed in the succeeding year.

4. The Fellowship is of the annual value of $1500.00, and will be paid in four instalments on presentation of satisfactory reports on the work of the Fellow from the Head of the Department in which he is working. At least nine calendar months' work at the University of Manitoba must be completed before the payment of the last instalment.

5. The appointments are open to graduates (excluding *ad eundem* graduates) of any Canadian University.

6 Each Fellowship will be tenable for a period of one year, and will be renewed for a further period only in a very exceptional case.

7. Each Fellowship may be held in any branch of pure or applied science (*i.e.*, the Natural and Physical Sciences, the Medical Sciences, Engineering, and Agriculture).

8. A candidate should adduce special qualifications in the subject in which he desires to carry on research. Published papers or evidence of completed research will be regarded as one evidence of such qualifications.

9. The entire time of the Fellow must be devoted to original research carried out under the general control of the Head of the Department in which he elects to work.

10. The nomination will be made by the Fellowship Committee of the Scientific Club of Winnipeg, in conjunction with the Chancellor and President of the University of Manitoba.

11. The regulations will be circulated to all the Canadian Universities, and other bodies likely to be interested, in January of each year. The applications must be in the hands of the Registrar of the University of Manitoba by April 1st of each year, and the appointment will be made on or about May 1st of each year. The Fellow will be required to commence his work at the University of Manitoba not later than the opening of the following session.

CLIFFORD MOIR PRIZE

A money prize of $100.00 given by Mr. J. J. Moir of Killarney, Man., in memory of his son the late Clifford James Moir, B.A., 1916, who gave his life in his country's service, June 30th, 1918, while a member of the Royal Air Force, is offered for competition each year among students graduating in Division D of the Course in Natural and Physical Science. The award of the money prize will be accompanied by the granting of a parchment certificate. The usual conditions of eligibility demanded for a gold medal will be exacted.

TRAVELLING SCHOLARSHIP

The sum of $600.00 is given annually from the revenue of the Isbister Trust for the maintenance of a Travelling Scholarship, to be awarded under the following conditions:

1. The object of the Travelling Scholarship is to assist students who have completed their Final Year in the University to pursue the special line of studies which they have selected, at some other University or seat of learning.

2. No student may hold a Travelling Scholarship for a longer period than two years; and no student who has once held such a scholarship may be eligible a second time.

3. Those eligible to compete for the scholarship are students who have graduated not more than twelve months previously, at the regular spring examination, in one of the special courses in Arts, or in the course in Medicine or Engineering.

4. One Travelling Scholarship is offered for competition in every alternate year, or oftener if a scholarship be vacant; and the course in which it is offered is decided by rotation in the following order:—The special course in Classics, the special course in Mathematics, the special course in Modern Languages, the special course in English Philosophy, the special course in Latin Philosophy, the special courses in Science, the course in Medicine, the courses in Engineering.

The course in which it is proposed to award it shall be announced in the Calendar of the year previous.

5. The scholarship is awarded to the student obtaining the highest marks at a special examination in the subjects of the selected course, the date and place of holding which is announced in the Calendar of the year previous; provided always that the scholarship shall not be awarded to any student who shall not have (a) obtained first class standing at the special examination, and (b) obtained first class standing and have passed in all subjects of his final examination. If these conditions be not satisfied the scholarship may, if the Board of Studies deem it advisable, be offered under similar conditions in the subjects of the course next in rotation.

6. The place at which the successful student shall pursue his studies shall be selected by the student, subject to the approval of the Board of Studies.

7. The scholarship is of the yearly value of $600.00, and the amount is paid each year in two moieties; provided that the second moiety in each year shall not be paid until the student shall have spent at least three months in studying at the institution selected, and shall have produced a certificate from the authorities of the institution of his having made satisfactory progress.

A special Travelling Scholarship Examination is held in June, at a date announced by the Registrar. Applications for this examination should be forwarded to the Registrar thirty days in advance.

The scholarship will be open for competition in the year 1923 to students who have graduated in that year or the previous year in Engineering.

THE RHODES SCHOLARSHIPS

By the will of the late Mr. Cecil Rhodes, a scholarship of the value of £300 yearly, tenable at any college in the University of Oxford for three consecutive academical years, has been allotted to the Province of Manitoba. Nominations to the scholarship are made by a committee of former Rhodes scholars now resident in Manitoba, under the chairmanship of Mr. Justice Perdue. The secretary of the committee is Professor Chester Martin of the University Arts Faculty. One appointment is made by the trustees in each year. Nomination of the 1922 scholar will be made in November, 1921. For a form of application request should be made to the secretary of the committee.

The following information as to the requirements and procedure in connection with appointments to Rhodes scholarships, as hitherto prevailing, is appended:

In order to be eligible for nomination to this scholarship, candidates—

(a) Must be British subjects, with at least five years' domicile in Canada, and unmarried.

(b) Must have spent four years in Manitoba educational institutions, two at least of which must have been as registered undergraduates of the University of Manitoba.

(c) Must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

The University of Manitoba has been admitted by the University of Oxford to the privileges of the Statute on Colonial and Indian Universities. This statute relieves its students of a certain standing from the requirements of Responsions (the first public examination exacted by the University of Oxford from each candidate for a degree), providing a sufficient knowledge of the Greek language has been shown. It also admits to Junior or Senior status, as follows:—

(a) Any member of a University so admitted, who shall have pursued a course of study prescribed by it and extending over two years, and who shall have passed all the examinations incident to the course, may be admitted to the status and privileges of a Junior Colonial or Indian Student.

(b) Any member of a University so admitted, who shall have pursued a course of study prescribed by it and extending over three full years, and who shall have taken honors in the final examination incident to the course, may be admitted to the status and privileges of a Senior Colonial or Indian Student.

Candidates for the scholarship, therefore, who have satisfied the condition of eligibility which requires a record of at least two years of undergraduate work in the University of Manitoba, are relieved of the necessity of passing a preliminary or qualifying examination, provided they hold standing in Greek equivalent at least to that of the Second Year in Arts.

If the University of Manitoba did not enjoy this privilege under the Statute on Colonial and Indian Universities, or if the two years of undergraduate work of the prospective candidate were not sufficient to relieve him from Responsions, a qualifying examination would be held prior to the election.

This examination is not competitive, but is intended to give assurance that all candidates are fully qualified to enter on a course of study at Oxford University. It is therefore based on the requirements for Responsions. Rhodes scholars may be selected from candidates who have successfully passed this preliminary examination.

Candidates must offer the following:—

(1) Arithmetic—the whole.

(2) Either Algebra—

Addition, Subtraction, Multiplication, Division, Greatest Common Measure Least Common Multiple, Fractions, Extraction of Square Root, Simple Equations containing one or two unknown quantities, and problems producing such equations.

Or the Elements of Geometry—

Elementary Questions, including propositions enunciated by Euclid, and easy deductions therefrom, will be set on the subject-matter contained in the following portions of Euclid's Elements, viz.:—

Book I.—The whole, excluding propositions 7, 16, 17, 21.
Book II.—The whole, excluding proposition 8.
Book III.—The whole, excluding propositions 2, 4 to 10, 13, 23, 24, 26 to 29.

Any method of proof will be accepted which shows clearness and accuracy in geometrical reasoning. So far as possible, candidates should aim at making the proof of any proposition complete in itself. In the case of propositions 1 to 7, 9, 10 of Book II., algebraical proofs will be allowed.

(2) Greek and Latin Grammar.

(3) Translation from English into Latin prose.

(4) Greek and Latin Authors.

Candidates must offer two books, one Greek and one Latin or Unseen Translation

The following portions of the undermentioned authors will be accepted:—

Demosthenes—De Corona.
Euripides—Any two of the following plays: Hecuba, Medea, Alcestis, Bacchae.
Homer—(1) Iliad 1—5, or 2—6; or (2) Odyssey 1—5, or 2—6.
Plato—Apology and Crito.
Sophocles—Antigone and Ajax.
Xenophon—Anabasis—1—4, or 2—5.
Caesar—De Bello Gallico, 1—4.
Cicero—(1) the first two Phillippic Orations; or (2) the first three Catiline Orations, and In Verrem, Act. I; or (3) the Orations. Pro Murena and Pro Lege Manilia; or (4) the treatises, De Senectute and De Amicitia.
Horace—(1) Odes 1—4; or (2) Satires; or (3) Epistles.
Livy—Books V, VI.
Vergil—(1) the Bucolics, with Books 1—3 of the Aeneid; or (2) the Georgics; or (3) the Aeneid, Books 1—5, or 2—6.

The texts used in setting the examination papers will be those of the Series of Oxford Classical Texts, so far as these have been published by the Oxford University Press.

Papers covering this range of study will be prepared by examiners appointed by the Trustees, and will be sent to each centre, where required, and at a date publicly announced, the examination will be held under proper supervision, and the papers returned to the examiners. A list of those who have successfully passed this test will, as soon as possible, be furnished the Committee of Selection, and from this list, and a list of other eligible candidates, the Committee will proceed to elect the scholar.

Candidates for the scholarship should, during the month of December, notify the Secretary of the Committee of Selection of their intention of becoming such candidates, forwarding at the same time a detailed statement of their record, proof of all matters necessary to establish their eligibility, and a list of references with whom the Committee of Selection may communicate respecting their fitness for appointment. The decision of the Committee of Selection is final.

The following extract from the will of the late Right Hon. Cecil John Rhodes serves to indicate some of the considerations taken into account in elections to this scholarship:

> "My desire being that the students who shall be elected to the scholarships shall not be merely bookworms, I direct that in the election of a student to a scholarship regard shall be had to (1) his literary and scholastic attainments; (2) his fondness of and success in manly outdoor sports, such as cricket, football and the like; (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness and fellowship; and (4) his exhibition during school days of moral force of character and of instincts to lead and to take an interest in his schoolmates; for those latter attributes will be likely in after life to guide him to esteem the performance of public duties as his highest aim. As mere suggestions for the guidance of those who will have the choice of students for the scholarships, I record that (1) my ideal qualified student would combine these four qualifications in the proportions of three-tenths for the first, two-tenths for the second, three-tenths fore the third, and two-tenths for the fourth qualifications, so that according to my ideas, if the maximum number of marks for any scholarship were 200, they would be apportioned as follows: 60 to each of the first and third qualifications and 40 to each of the second and fourth qualifications; (2) the marks of the several qualifications would be awarded independently as follows (that is to say) the marks for the first qualification by examination, for the second and third qualification respectively by ballot by the fellow-students of the candidates, and for the fourth qualification by the head master of the candidate's school; and (3) the results of the awards (that is to say, the marks obtained by each candidate for each qualification) would be sent as soon as possible for consideration to the trustees or to some person or persons appointed to receive the same, and the person or persons so appointed would ascertain by averaging the marks in blocks of 20 marks each of all candidates the best ideal qualified students."

No student shall be qualified or disqualified for election to scholarship on account of his race or religious opinions.

The Committee of Selection is asked to furnish to the Trustees as full a statement as possible of the school and college career of each elected scholar, with the special grounds of his appointment, together with suggestions, if desired, as to the course of study for which he is best fitted.

A qualified student who has been elected as aforesaid shall within six calendar months after his election, or as soon thereafter as he can be admitted into residence, or within such extended time as the Trustees shall allow, commence residence as an undergraduate at some college in the University of Oxford. The scholarship is payable to him from the time when he commences such residence.

Any inquiries about Oxford, its colleges and the courses of study there, should be addressed to F. J. Wylie, Esq., the Oxford agent of the Rhodes Trustees.

Copies of Oxford Responsion papers for past years can be obtained from the Copp, Clark Company, Toronto. The Student's Handbook of Oxford can be ordered at the same address. It gives full information about the examinations of the University, subject to changes made since the last edition was issued. "Oxford As It Is," a small pamphlet prepared by Mr. Louis Dyer, of Harvard and Balliol Colleges, for the use of American candidates, gives all essential information in a condensed form. It can also be ordered from the Copp, Clark Company, Toronto. "Oxford and Its Colleges," written by Mr. J. Wells, of Wadham College, and "Oxford and Oxford Life," edited by the same gentleman, may be recommended to those who wish to gain full information about the Universitv and its Colleges.

PRIZES IN MEDICINE

Two microscopes, known as "The Chown Prizes in Medicine," provided from the revenue of a fund created by the Faculty of Manitoba Medical College, are awarded each year to the two students of the Fifth Year in Medicine who have obtained the highest standing in Medicine and in Surgery respectively, of the Fourth and Fifth Years. Both theoretical and clinical examinations are taken into account.

MEDALS

(a) The Governor-General's Medal.

The Governor-General's *Gold Medal*, the gift of His Excellency the Governor-General is awarded annually to the student of the Third Year in Arts ranking highest on the aggregate of the examinations of the full course of the first three years in Arts.

(b) University Medals.

A Gold Medal is awarded annually to the student standing first in order of merit at the final examination of each of the following courses or subjects in Arts, provided his standing on the aggregate of the marks be 80 per cent. or above: *General Course; Philosophy (English); Philosophy (Latin); Mathematics; Natural and Physical Science; Greek major; Latin major; Hebrew major; English major; French major; German major; History major; Political Economy major.

Gold Medals are awarded annually to the students standing first in order of merit at the final examinations in Civil Engineering and in Electrical Engineering, provided their standing on the aggregate of the marks be 80% or above.

A Gold Medal is awarded annually to the student standing first in order of merit in the final examination of the course in Medicine, provided his standing on the aggregate of the marks be 80 per cent. or above.

A Gold Medal is awarded annually to the student standing first in the order of merit in the final examination of the course in Law, provided his standing on the aggregate of the marks be 80 per cent. or above.

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*In the award of the medal in the General Course, all five subjects shall be taken into account, according to the following method: The percentage of the highest candidate in each subject shall be raised to 100, and that of each of the other candidates in proportion. and the medal awarded on the basis of these raised percentages.

(c) Special Medals.

A Gold Medal, presented by Mr. J. Lonsdale Doupe, in memory of his father, Mr. Joseph Doupe, is awarded annually to the student obtaining the highest first-class standing on the Third and Fourth Year Examinations of the course in Civil Engineering.

A Gold Medal, presented by Dr. Edith M. Ross, in memory of her grandmother, Dr. Charlotte W. Ross, is awarded annually to the student of the Fifth Year in Medicine obtaining the highest standing in Obstetrics and Pediatrics of the Fourth and Fifth Years.

DEGREES IN ABSENTIA

No degree will be conferred *in absentia* except where good reasons for absence have been submitted to, and approved by the Board of Studies, or the Council, and an additional fee of ten dollars may be exacted in each case where permission is granted.

GRADING OF DEGREES

All degree diplomas granted by the University are graded as follows: *rite*, indicating standing between the pass mark and 66 per cent. inclusive; *cum laude*, indicating standing between 67 per cent. and 79 per cent., inclusive; *magna cum laude*, indicating standing of 80 per cent. and above.

UNIVERSITY DRESS

No undergraduate student shall present himself at any University Examination, or at any meeting of the University, unless he be clothed in the academic dress peculiar to his college.

The materials and colors prescribed by the Council for the hoods to be worn by graduates of the University are as follows:—

B.A.—Black stuff, edged with white rabbit skin, with a braid of green silk.

M.A.—Black corded silk, lined with scarlet corded silk.

M.D.—Black cashmere, lined with purple corded silk.

M.D., C.M.—Black cashmere, lined with purple corded silk and edged with violet silk.

LL.B.—Black silk stuff, lined with white silk, edged with narrow white rabbit skin, and narrow green silk braid along the border

B.S.A—Black, lined with green, and edged with white rabbit-skin.

B.H.Ec.—To be determined.

B.Sc. (Phar.)—Black, lined with light blue and edged with white rabbit-skin.

B.Sc. (C.E.)—Black, lined with yellow and edged with white rabbit-skin.

M.C.E.—Black, lined with yellow.

B.Sc. (E.E.)—Black, lined with yellow and edged with white rabbit-skin.

M.E.E.—Black, lined with yellow.

B.M.E.—Black, lined with yellow and edged with white rabbit skin.

B.Sc.—Black, lined with gold yellow and edged with white rabbit skin.

LL.D.—Scarlet cloth lined with white moire silk.

FEES

The following fees are required and must be paid to the Accountant of the University in advance. Regular Examination fees are payable at the time of registration, degree fees not later than the last date for payment of second term tuition fees. Supplemental examination fees are payable at the time application for the examination is made. The fees for admission *ad eundem statum* or *ad eundem gradum* are payable at the time application therefor is made.

Matriculation Examinations.

For Matriculation (Part I.)	$ 3.00
For Matriculation (Part II.)	4.00
For Matriculation (Parts I. and II.)	6.00
For Matriculation by subjects, each subject	2.00

For Part I. Matriculation Supplemental Examination—

One subject	$ 2.00
Two or more subjects	3.00

For Part II. Matriculation Supplemental Examination—

One subject	$ 6.00
Two subjects	7.00
Three subjects	8.00

This scale of fees applies to the September examinations only. The June Matriculation Examination fees are payable to the Department of Education, and are on a scale fixed by the Department.

Examinations Above Matriculation.

For each Regular Annual Examination (payable at the time registration for the year's work is made).	$ 8 00

For each Supplemental Examination*—

One subject	$ 6.00
Two subjects	7.00
Three subjects	8.00
Examination for License to Practise Medicine	15.00

Registration

Registration (payable the first time a student registers in any Faculty)	$2.00

Tuition

For Arts and Science and Senior Matriculation Students—

A full course, any year	$36.00
A single subject (without laboratory work) (First and Second Years or General Course Third and Fourth Years)	8.00
A single subject as above, with laboratory work	10.00
A major subject, Third and Fourth Years	18.00
A minor subject, Third and Fourth Years	9.00

For Students in Engineering and Architecture—

First year	$55.00
Second Year	65.00
Third Year, any course	80.00
Fourth Year, any course	80.00

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*For further details see page 160.

For Students in Pharmacy—	
Any year	$75.00
For Students in Medicine—	
First, Second and Fifth Years	$150.00
Third and Fourth Years	160.00

(The tuition fee of each special student is determined by the Dean of the Faculty concerned after consultation with the Professor in whose department the student receives instruction.)

Payment of Second Term tuition fees may be deferred to first week of the Second Term, but only on the basis of a slightly higher tuition fee as follows.

	Per Term in Instalments
Arts, Science and Senior Matriculation	$20.00
Engineering and Architecture—	
First Year	30.00
Second Year	35.00
Third and Fourth Years	42.50
Medicine—	
First, Second and Fifth Years	80.00
Third and Fourth Years	85.00

Degrees

For the Degree of B.A.	$10.00
For the Degree of M.A.	10.00
For the Degree of LL.B.	10.00
For the Degree of B.Sc. (Phar.)	10.00
For the Degree of M.D.	10.00
For the Degree of C.M.	15.00
For the Degree of B.Sc. (C.E.)	10.00
For the Degree of B.Sc. (E.E.)	10.00
For the Degree of M.C.E.	20.00
For the Degree of M.E.E.	20.00
For the Degree of B.Sc.	10.00
For the Degree of M.Sc.	10.00
For the Degree of B.Arch.	10.00
For the Degree of B.S.A.	10.00
For the Degree of B.H.Ec.	10.00
For the conferring of any Degree *in absentia* (for which the consent of the Board of Studies or the University Council must be secured), an additional fee of	10.00
For admission *ad eundem statum*	5.00
For admission *ad eundem gradum*	10.00

Appeals

Each paper	$ 2.00

Special

For a Certificate of Standing	$ 2.00
For a Statement of Marks, on request	1.00
For a Complete Bound Set of Examination Papers	1.00

Caution Money

Arts students in the special courses in Mathematics and Natural and Physical Science, Science students and students in Engineering and Architecture, and all others taking practical or laboratory classes in the University, are required to deposit with the Accountant at the beginning of each session the sum of $5.00. Against this will be assessed the value of all apparatus broken or materials wasted in any way other than in the legitimate course of class work, and the balance will be refunded at the close of the term. All other students make a caution money deposit of $2.00.

APPENDIX I.

THE UNIVERSITY LIBRARY

Frank Emmett Nuttall, M.A., Librarian

The main library occupies three rooms in the old Law Courts, of which the main reading room was formerly the library of the Law Society. The total number of volumes may be estimated at 29,000, and the annual accessions are about 2,000 volumes. The nucleus of the collection was that portion of the Isbister library which escaped destruction by fire, but the greater part of it has been acquired during the past ten years by purchase or by gift.

The following periodicals are received by the University:

Action Française
Aeronautics
Agricultural Gazette of Canada
Agricultural Research Institute, Pusa: Bulletin
American Architect
American Economic Review
American Historical Review
American Journal of Anatomy
American Journal of Archaeology
American Journal of International Law
American Journal of Mathematics
American Journal of Pharmacy
American Journal of Philology
American Journal of Physiology
American Journal of Science
American Journal of Semitic Languages and Literatures
American Mathematical Monthly
American Mineralogist
American Naturalist
Anatomischer Anzeiger
Ancient Egypt
Anglia
Anglia: Beiblatt
Annalen der Physik
Annales de Chimie
Annales de Physique
Annals of the American Academy of Political and Social Science
Annals of Archaeclogy and Anthropology
Annals of Botany
Annals of Mathematics
Architectural Forum
Architectural Record
Architectural Review (Boston)
Architectural Review (London)
Architecture
Archives Italiennes de Biologie
Art and Archaeology
Astronomical Journal
Astrophysical Journal
Athenaeum
Atlantic Monthly
Automotive Industries

Bankers Magazine (American)
Bankers' Magazine (English)
Beama
Berichte der deutschen botanishen Gesellschaft
Berichte der deutschen chemischen Gesellschaft
Bibliographic Service
Bibliographischer Monatsbericht
Bibliothèque Universelle
Biometrika
Blackwood's Edinburgh Magazine
Book List
Bookman (American)
Bookman (English)
Botanical Abstracts
Botanical Gazette
Brain
Bulletin of the American Mathematical Society
Bulletin Astronomique
Bulletin of the Bureau of Education (Department of the Interior, U.S.A.)
Bulletin of the Geological Society of America
Bulletin of the National Tax Association
Bulletin de la Société Chimique de France

Canadian Bookman
Canadian Chemical Journal
Canadian Engineer
Canadian Field Naturalist
Canadian Finance
Canadian Forum
Canadian Historical Review
Canadian Journal of Mental Hygiene
Canadian Machinery
Canadian Magazine
Canadian Mining Journal
Canadian Municipal Journal
Canadian Railway and Marine World
Car, The
Centralblatt fur Mineralogie, Geologie und Palaeontologie
Century
Chemical Age
Chemical and Metallurgical Engineering
Chemical News
Chemisches Zentralblatt
Clarkson Bulletin
Classical Journal
Classical Philology
Classical Quarterly
Classical Review
Classical Weekly
Comptes rendus de l'Académie des Sciences
Comptes rendus de la Société de Biologie
Concrete and Constructional Engineering
Concrete Builder
Concrete Highway Magazine
Concrete in Architecture and Engineering
Conservation
Construction
Contemporary Review
Contract Record
Contractor's Atlas
Cumulative Book Index
Current History

Dalhousie Review
Deutsche Literaturezeitung
Dial
Dickensian
Drama
Druggists' Circular

Economica
Economic Geology
Economist
Educational Review
Electrical Industries
Electrical News
Electrical Review (American)
Electrical Review (English)
Electrical World
Electrician
Electric Journal
Electric Railway Journal
Empire Mail
Endocrinology
Engineer, The
Engineering
Engineering and Contracting
Engineering and Mining Journal
Engineering News Record
Engineering Review
Englische Studien
English Historical Review
English Journal
English Review
Eugenics Review
Euphorion

Farmers' Telegram
Financial Post of Canada
Fortnightly Review

Garden Cities and Town Planning
Gas Journal
Gazzetta Chimica Italiana
General Electric Review
Génie Civil
Geographical Journal
Geological Magazine
Good Furniture
Grinnell Company Bulletin

Harper's Magazine
Hibbert Journal
Highway
History
Hoppe-Seyler's Zeitschrift
House and Garden
Hydro-Electric Power Commission of Ontario Bulletin
Illustration
Industrial Management
Inter-America (English)
Inter-America (Spanish)
International Conciliation
International Index to Periodicals
International Journal of Ethics
International Studio
Iron Age

Jahrbucher fur Wissenschaftliche Botanik
Johns Hopkins University Circular
Journal of Agricultural Research
Journal of American Folk-lore
Journal of The American Institute of Architects.
Journal of The American Oriental Society
Journal of The Biological Chemistry
Journal of the Canadian Bankers' Association
Journal of the Chemical Society
Journal of Comparative Legislation and International Law
Journal des Economistes
Journal of the Engineers' Club of St. Louis
Journal of English and Germanic Philology
Journal of Geology
Journal of Hygiene
Journal of Immunology
Journal of Infectious Diseases
Journal of the Institute of Actuaries
Journal of the Institute of Bankers
Journal of the Institution of Electrical Engineers
Journal of the Iron and Steel Institute
Journal de Mathématiques
Journal of the National Educational Association
Journal of the New England Water Works Association
Journal of Parasitology
Journal of Pathology and Bacteriology
Journal of Philosophy, Psychology and Scientific Methods
Journal of Physical Chemistry
Journal of Physiology
Journal de Physiologie et de Pathologie Générale
Journal de Physique et le Radium
Journal of Political Economy
Journal of Religion
Journal of the Royal Asiatic Society
Journal of the Royal Astronomical Society of Canada
Journal of the Royal Microscopical Society
Journal of the Society of Automotive Engineers
Journal of Urology
Journal of the Western Society of Engineers
Justus Liebig's Annalen der Chemie

Labour Gazette
Lancet
Lefax (Civil and Mining)
Lefax (Electrical)
Lefax (Mechanical)
Literarisches Echo
London Mercury

Machinery
Manitoba Free Press (Morning)
Manitoba Gazette
Manitoban
Manitoba Veteran
Mathematical Gazette
Mechanical Engineering
Medical Research Council: Special Report Series
Memoirs of the Department of Agriculture in India—Bacteriological Series
Memoirs of the Department of Agriculture in India—Botanical Series
Memoirs of the Department of Agriculture in India—Chemical Series
Memoirs of the Department of Agriculture in India—Entomological Series
Messenger of Mathematics
Miami Conservancy Bulletin
Mind
Mining and Scientific Press
Modern Language Notes
Modern Language Review
Modern Philology
Monatsregister
Monthly Bulletin of Agricultural Statistics
Monthly Notices of the Royal Astronomical Society
Monthly Report of the Department of Trade, etc., of Canada
Municipal Engineering

Nation (English)
Nation (New York)
Nationaliste
Natural History
Nature
N.E.A. Bulletin
Neue Rundschau
Neues Jahrbuch
New Phytologist
New Republic
New Statesman

New York Times Index
Nineteenth Century and After
North American Flora
Notes and Queries
Nuovo Cimento

Observatory
Ontario Library Review

Palestine Exploration Fund: Quarterly Statement
Pfluger's Archiv
Pharmaceutical Journal
Philosophical Magazine
Philosophical Review
Philosophical Transactions of the Royal Society of London (Series A)
Philosophical Transactions of the Royal Society of London (Series B)
Physical Review
Physical Society of London: Proceedings
Physikalische Zeitschrift
Physiological Abstracts
Poet Lore
Poetry Review
Political Science Quarterly
Polytechnic Magazine
Popular Astronomy
Popular Mechanics
Power
Power Plant Engineering
Proceedings of the Academy of Political Science
Proceedings of the American Institute of Electrical Engineers
Proceedings of the American Society of Heating and Ventilating Engineers
Proceedings of the Institute of Radio-Engineers
Proceedings of the Institution of Civil Engineers
Proceedings of the London Mathematical Society
Proceedings of the National Academy of Sciences of U.S.A.
Proceedings of the Royal Society (Series A)
Proceedings of the Royal Society (Series B)
Proceedings of the Royal Society of Edinburgh
Proceedings of the Zoological Society of London
Professional Memoirs
Publications of the Dominion Astrophysical Observatory

Quarterly Journal of Economics
Quarterly Journal of Experimental Physiology
Quarterly Journal of the Geological Society
Quarterly Journal of Mathematics
Quarterly Journal of Microscopical Science
Quarterly Journal of North Dakota
Quarterly Journal of the Royal Meteorological Society
Quarterly Journal of the University of North Dakota
Quarterly Review
Queen's Quarterly

Railway Age
Readers' Guide to Periodical Literature
Religious Education
Review of Applied Entomology (Series A)
Review of Applied Entomology (Series B)
Revue des Deux Mondes
Revue Générale de l'Electricité
Revue Historique
Revue Mondiale
Rhodora
Romania
Round Table

School Life
Science
Science Abstracts—Sec. A—Physics
Scientia
Scientific American and Supplement
Scientific American Monthly
Scientific American Weekly
Scientific Monthly
Seasonable Hints: Eastern and B.C. Edition
Seasonable Hints: Prairie Edition
Smithsonian Miscellaneous Collections
Spectator (London)
Spectator (New York)
Statist
Statistical Bulletin, Metropolitan Life Insurance Co.
Successful Methods

Telephone Engineer
Times (London), Educational Supplement
Times (London), Engineering Supplement
Times (London), Literary Supplement
Times Weekly Edition
Town Planning and Conservation of Life
Transactions of the Actuarial Society of America
Transactions of the American Society of Civil Engineers
Transactions of the American Institute of Electrical Engineers
Transactions of the American Mathematical Society
Transactions of the Faraday Society
Transactions of the Illuminating Engineering Society
Transactions of the Royal Society of Canada

United Empire
United States Geological Survey: Department of the Interior: Bulletin, and Water Supply Papers
University of Alberta: Press Bulletin
University of Illinois Bulletin
University of Illinois Studies in Language and Literature
University of Illinois Studies in the Social Sciences
University of Iowa: Studies
University Monthly (New Brunswick)
University Monthly (Toronto)
University of the State of New York: Bulletin, New York State Library; Bibliographic Series
University of Wisconsin Studies in Language and Literature

Value World
Vasari Society: Old Masters
Veteran
Vocational Summary

West Trade World
Weekly Bulletin: Department of Trade and Commerce, Canada
Weekly Review
Western Municipal News
Winnipeg Community Builder
Wochentliches Verzeichnis

Yale Review
Year Book of Wireless Telegraphy and Telephony

Zeitschrift der deutschen Gesellschaft fur Mechanik und Optik
Zeitschrift fur Botanik
Zeitschrift fur Instrumentenkunde
Zeitschrift fur Physikalische Chemie
Zeitschrift fur Krystallographie und Mineralogie
Zeitschrift fur Technische Physik

APPENDIX II.

DEGREES GRANTED IN 1920-21

June 22nd, 1920.

Bachelor of Arts

Marwood, Clifford Ormsby

November 18th, 1920.

Bedard, Beatrice
Daigneau, Lillie Genevieve
Fallon, Catherine Mabel
Moore, Andrew
Rivers, Herald Abbot

Doctor of Medicine

Yule, Robert Foreman, B.A.

Diploma in Pharmacy

Adams, John William
Boardman, John Henry
Burke, Ernest
Dack, Adolph
Evans, Edna Eunice
Fenwick, Thomas
Hutchinson, Charles Bernard
Jenkins, George Harold
Maguire, Robert Willoughby
McBurney, Charles Jasper
McDougall, Dougald
Mitchell, Graham
Reid, Allan Burnett
Russell, George Ernest
Snell, Harold
Whyte, George

January 20th, 1921.

Bennett, Henry Jamieson
Budd, Arthur Samuel
Witherspoon, Alexander Charles

May 20th, 1921

Bachelor of Arts

Allingham, Clara Margaret
Alton, Herbert Edward
Andrews, Wilbur Edgar
Arnason, Ingolfur Gilbert
Arthur, Joseph
Austin, Winifred Gladstone McCallum
Best, Christopher Thomas
Bodanis, Rose Frances
Broadfoot, Ina Isobel
Bryce, Helen Forbes

Bachelor of Arts—Continued

Cameron, Alice
Carey, Irene
Champagne, Léonce
Churchill, Gordon Minto
Clark, John Neville
Coade, Errol Noble
Collins, Leo Hugh
Coppleman, Archie
Cross, Eva Alice
Davidson, Ida Marion
Diner, Nathan
Dufort, Alphonse
Ellis, Anne Ethelwyn
Enright, Florence Anna
Ferguson, Eva Matilda
Fleming, Margaret Davidson
Fletcher, James Gordon
Hazlewood, Myrtle May
Heeney, Arnold Danford
Hoffer, Peter
Isaac, William John
Johnston, Harry
Kahana, Joseph
Kenzie, Walter A.
Korczynski, John
La Flèche, Camille
Lamont, Winnifred Margaret
Lemay, Eugène
Longmore, Roderick Hector
Lovell, Mildred Agnes
Mackay, Jeannie Dorothy
Matheson, Agnes Eleanor
McCartney, Roy Clifford
McGregor, Isobel Cranstoun
McIntosh, George Thomas
Mills, Albert Livingstone
Mills, Elsie Dorothy
Monteith, Mary Constant
Mutch, Leslie Alexander
Nason, Lizetta Randle
Newman, Frank Wright
Norton, Miriam Isobel Davis
Pearl, Solomon
Pritchard, Charlotte Lilian
Robertson, Anna Amy
Robertson, Hugh Alexander
Robins, George Ernest
Rosevear, Marion
Rumball, Wilfrid Gladstone
Sanger, Maurice

Bachelor of Arts—Continued

Saunders, Doris Boyce
Shere, Louis
Sinclair, Burton Leslie
Smith, Flora Berenice Aveline
Stewart, William Murray
Talbot, Mary Marjorie
Treble, Cecil Diment
Trohak, Joseph
Truesdale, Beatrice Dalzell
Turnbull, John
Valgardsson, Valentinus
Weinberg, Mollie
Wintrobe, Maxwell Myer

Bachelor of Science

Hennell, Leo
Johnson, William Penn
Lipshitz, Solomon George
McHaffie, Ivan Roy, B.A.
Moore, Andrew, B.A.

Bachelor of Laws

Allan, David Jeffrey, B.A.
Annis, Harold Ryerson, B.A.
August, William Howard, B.A.
Barber, Charles Dawson Gordon
Bass, Morris
Bastin, Frank Martin
Broadfoot, John Campbell
Broatch, Angus Campbell, B.A.
Brotman, Ernest A., M.A.
Christie, Augustus James
Crook, William Henry, B.A.
Cross, Jesse Edward, B.A.
Deacon, Ivan James Rochester
Dennistoun, Robert Peel
Eggertson, Arni Gudni
Gibben, John Edward, B.A.
Hinch, Thomas Wilfred Bell, B.A.
Jackson, Iva Bell
Laidlaw, Thomas Walter
Loadman, Frank Ivan, B.A.
Lye, Henry Arthur
Macleod, George Peterkin
McMurray, Mildred Beatrice, B.A.
Michell, David Charles
Moore, William Athol
Pennyfather, Thomas Richard
Popham, Earle Cameron, B.A.
Pritchard, Artemas Paul
Ritchie, Francis Gordon
Rogers, George Earle

Bachelor of Laws

(*Ad eundem gradum*)

Hyman, Marcus, B.A. (in Jurisprudentia), University of Oxford

Doctor of Medicine

Abbott, Albert Clifford, B.A.
Austmann, Kristjan Jonsson, B.A.
Blakie, Neil Hector
Cunningham, Edison Rainey, B.A.
Dubnove, Aaron, B.A.
Finkelstein, Manly
Fraser, Donald John
Fraser, William Ross
Good, Hilton Samuel
Goodwin, John Murray
Greene, Samuel S.
Gryte, Lewis Adolf, B.A.
Hamilton, Thomas Wilfred
Henry, John Milton
Kitchen, Hubert Daniel
Lee, George Harold, B.A.
Little, George Meldrum
Magwood, William James
McCrimmon, John Roderick
McGuire, James Balfour
McKenzie, William Gordon
Menzies, Alexander Morrison
Meredith, Charles James
Mollard, William Melville
Morison, Harold
Pincock, Thomas Alexander
Rady, Max
Simpson, James Wendell
Smith, Harriet Isabel
Thompson, Steinn Olafur, B.A.
Walsh, Frank Burton
White, Ira Simmonds
Wilson, Margaret Jane

Master of Surgery

Abbott, Albert Clifford, B.A.
Brownlee, Thomas Irwin, M.A.
Cunningham, Edison Rainey, B.A.
Kitchen, Hubert Daniel
White, Ira Simmonds

Bachelor of Science in Pharmacy

(*Ad eundem gradum*)

Bletcher, Henry Ernest John, Phm.B., University of Manitoba

Diploma in Pharmacy

Burkett, Arthur Earl
Perrault, Clement Joseph

Bachelor of Science in Civil Engineering

Abel, John Stewart
Boyd, Thomas Hilliard
Cassin, Charles Morgan
Dingle, James Christian
Evans, Victor Hamilton
Fleming, John Murray
Johnson, Emil Einar
Whitehill, Peter

Bachelor of Science in Electrical Engineering

Bregman, Max
Dick, Victor William
Frith, Lawrence Edward Cokayne, B.A.
Kelsey, Ernest Starkey
Litin, Leon
Lovell, William Edward
Quealy, Oscar Harold
Williams, Arthur Samuel

Bachelor of Architecture

Heatley, Harold Montague

Bachelor of Home Economics

Hallwright, Gladys
Lyon, Margaret
Reid, Margaret
Shafer, Alberta
Sissons, Verna Victoria Violet
Sproule, Laurie L'Estrange
St. Ruth, Doris
Thordarson, Thorey

Bachelor of Science in Agriculture

Bissett, Chester Robert Gordon
Carlson, John Alfred
Chapman, Clifford Sifton
Coltart, Thomas Haining
Fowler, William A.
Goorevitch, Julius
Graham, John Douglas
Hopkins, John James
Hopper, Robert Milton
Kennedy, William Alexander
Laughland, Frank
Mutchmor, Shirley McLaughlin
Norquay, John
Parker, William James
Popp, William
Prodan, Cornelius Safronovitch
Sallans, Bryce John
Trembath, James
Vannice, Elmer

Bachelor of Science in Agriculture

(Ad eundem gradum)

Sommerfeld, Howard Bruno, B.S.A., University of Saskatchewan, 1921.

Master of Arts

Argue, Robert Fletcher, B.A., University of Manitoba, 1911. Major: English Literature. Minor: English Language. Thesis: "Shakespeare's National Ideals."

Broatch, Angus Campbell, B.A., University of British Columbia, 1918. Major: Political Economy. Minor: Economic History. Thesis: "The Fiscal Policy of the British Empire."

Brotman, Ernest A., B.A., University of Manitoba, 1918. Major: Economics. Minor: Political Science. Thesis: "The State and the Individual." (As at January 20th, 1921.)

Ellis, Alice Kathleen, Mediaeval and Modern Languages Tripos (English and French), Newnham College, Cambridge, England, 1909. Major: English Literature. Minor: English Language. Thesis: "The Supernatural—Its place in the Poetry of the English Romantic Movement."

Erickson, John, B.A., University of Manitoba, 1913. Major: Political Economy. Minor: Political Science. Thesis: "Unemployment, Its Causes and Suggested Remedies." (As at January 20th, 1921)

Greer, Irene Eunice, B.A., University of Manitoba, 1920. Major: English Literature. Minor: English Language. Thesis: "Dickens and Romanticism."

Hollenberg, Michael Samuel, B.A. University of Manitoba, 1920. Major and Minor: Biochemistry and Physiology. Thesis: "Research Work in Biochemistry and Physiology."

Master of Arts—Continued

Laberge, Georgine, B.A., University of Manitoba, 1920. Major: French. Minor: Political Science. Thesis: "La Bruyère Portraitiste."

Shannon, Simon, B.A., University of Manitoba, 1920. Major: Mathematics. Minor: Applied Mathematics. Thesis: "Regions of Real Motion for Jupiter's Satellites and Comets."

Master of Arts

(*Ad eundem gradum*)

MacLean, Neil Bruce, M.A., 1908, University of Toronto.

Master of Science

(*Ad eundem gradum*)

Lowe, Charles William, M.Sc., University of Birmingham.

Doctor of Laws

Bedford, Spencer Argyle, Department of Agriculture, Manitoba; sometime Professor of Field Husbandry, Manitoba Agricultural College.

Blanchard, Robert Johnstone, M.B., C.M., 1877, University of Edinburgh.

APPENDIX III

STUDENTS IN ATTENDANCE, 1920-1921

ARTS

(Unless otherwise indicated, the Post Office is in Manitoba.)

N.B.—Under the heading "College," U represents University; St. B., St. Boniface College; St. J., St. John's College; W., Wesley College; and Ex-M., Extra Mural. Where the student received instruction at more than one institution, this is indicated, the name of the institution at which the major part of the instruction was received coming first.

First Year

Name	*College*	*Address*
Abbott, John L.	(W)	Winnipeg
Ablett, Winnifred Muriel Louise	(St. J)	Elkhorn
Abrahamson, Sara	(U)	Winnipeg
Ackland, Helen Jessie	(U)	Winnipeg
Allard, Hector	(St. B)	Marquette
Allison, Frederick Gerard	(U)	Winnipeg
Anderson, Gordon Murray	(W)	Elgin
Anderson, James Frederick	(U)	Kawende
Anderson, Lionel J.	(W)	Stratton, Ont.
Anderson, William Abraham	(Ex-M)	Winnipeg
Arnason, Gudmundur	(Ex-M)	Oak Point
Babb, Thomas Erroll	(U)	Sidney
Bamford, Frederick William	(U)	Winnipeg
Barrow, Evelyn Roberts-ffrench	(St. J)	Winnipeg
Bedford, Clarence Nelson	(W)	Darlingford
Belanger, Rodolphe	(St. B)	Letellier
Belden, Annie Mabel	(W)	Winnipeg
Belden, Lorne Howe	(W)	Winnipeg
Belt, Kathleen Alison	(U)	Winnipeg
Bennett, Donald Royden	(U)	Winnipeg
Bere, Ruby	(U)	Winnipeg
Bill, William	(U)	Winnipeg
Blakeman, Edna Grace	(U)	Winnipeg
Blakeman, Gordon	(U)	Winnipeg
Bodnar, Alexander	(St. B)	Portage la Prairie
Boismier, M. Louise	(Ex-M)	Winnipeg
Bokofsky, Dora Florence	(U)	Winnipeg
Booth, Wilfrid Gatley	(U)	Austin
Bodanis, Harry Sam	(Ex-M)	Winnipeg
Boughton, Phoebe V.	(W)	Arden
Bowes, George Hamilton	(U)	Winnipeg
Brecken, Melville William	(U)	Fort Frances, Ont.
Bruce, Robert Leishman	(U)	Carman
Brynjolfson, Alexandra	(W)	Lundar
Buchowski, Walter	(U)	Sudbury, Ont.
Cann, Alfred Sifton	(U)	Winnipeg
Caplan, Max	(U)	Winnipeg
Caron, Laurent	(St. B)	St. Charles

Name	*College*	*Address*
Carstens, Kaethe Maria Deborah	(U)	Winnipeg
Chapman, Douglas Cameron	(U)	Winnipeg
Charlton, William Clifford	(Ex-M)	Portage la Prairie
Chercover, Edythe	(U)	Winnipeg
Clement, Harold Dixon	(W)	Brandon
Cochran, Edith Catherine	(W)	Neepawa
Colish, Hymie	(U)	Winnipeg
Couch, Carlyle Salisbury	(St. J U)	Rivers
Coulson, Thomas Albert	(St. J)	Winnipeg
Coupal, Camil Dubuc	(St. B)	Winnipeg
Craig, Gladys	(U)	Winnipeg
Crosby, Alma Blanche	(W)	Gilbert Plains
Cross, Mary Lillian	(U)	Winnipeg
Cross, Robert McIlroy	(U)	Winnipeg
Cumming, Edith Margaret	(W)	Winnipeg
Curry, Wilma J.	(W)	Pilot Mound
Daly, Viola	(U)	Winnipeg
Dandy, Eric F.	(U)	Winnipeg
Dankesreiter, Rudolph Verne	(Ex-M)	Portage la Prairie
Dansereau, Auguste	(St. B)	Letellier
Davidson, Alan Mitchell	(U)	Winnipeg
Davie, Albert William	(W)	Winnipeg
Davis, William C.	(W)	Rocanville, Sask.
Dick, Robert L.	(U)	Winnipeg
Doxtator, Chas. William	(U)	Mather
Driscoll, Robert John	(U)	Winnipeg
Dryden, Evelyn Annie	(U)	Winnipeg
Dunnett, John	(U)	East Kildonan
Durnin, Chas. Ed. Clare	(W)	Thornhill
Dussault, Maurice	(St. B)	Winnipeg
Dwyer, William Emmet	(U)	Winnipeg
Easton, Madeline	(U)	Winnipeg
Echlin, Florence Isabel	(U)	Winnipeg
Elder, William Hunter	(U)	Lewis
Elliott, Eileen Alice	(U)	Winnipeg
Elliott, Tom Marwell	(U)	Winnipeg
English, Kathleen May	(W)	Winnipeg
Evasiuk, Elias George	(U)	Sifton
Farewell, Alice Gertrude	(W)	Winnipeg
Fedorowich, Joseph	(St. B)	Winnipeg
Fenson, Nathan	(U)	Winnipeg
Ferguson, Agnes Olive	(U)	Moosomin, Sask.
Finkelstein, David S.	(U)	Winnipeg
Finson, Frederick Alex.	(U)	Winnipeg
Flanders, Elizabeth	(W)	Winnipeg
Foreman, Fred	(W)	Arden
Forrest, Margaret Woodhull	(Ex-M)	Souris
Fraser, Eleanor Ada	(W)	Hamiota
Frederickson, Sigrun Sumarros	(W)	Calder, Sask.
Frayne, Robert McKee	(W)	Stonewall
Gagné, Jean-Marie	(St. B)	St. Pierre Jolys
Galarneau, Francois	(St. B)	Forget, Sask.
Galt, George Michael	(U)	Winnipeg
Gareau, Emile	(St. B)	Winnipeg
Garland, Phyllis Helena	(Ex-M)	Portage la Prairie

Name	*College*	*Address*
Garson, William Robert	(U)	Winnipeg
Gendreau, Lionel	(St. B)	St. Norbert
Gerein, Frank	(St. B)	Vibank, Sask.
Gilmour, Samuel MacLean	(U)	Carlyle, Sask.
Goldin, Bertha	(U)	Winnipeg
Goodeve, Charles Frederick	(U)	Winnipeg
Goodwin, Rodney Richard	(U)	Elkhorn
Gordon, Margaret	(U)	Winnipeg
Goresky, Isadore William	(U)	Rosa
Gourlay, Helen	(U)	Winnipeg
Greenberg, Harry	(U)	Winnipeg
Greenway, Harold Franklin	(U)	Winnipeg
Greszczuk, Theodore	(St. B)	Cromwell
Gross, Edward Conrad	(St. J)	Moosomin, Sask.
Gunn, Vera Louise	(U)	Winnipeg
Gunn, Willa Alice	(U)	Winnipeg
Guyot, Henri	(St. B)	Fannystelle
Hacking, Frank	(W)	Winnipeg
Hall, Mary Margaret	(Ex-M)	Portage la Prairie
Hallett, Evelyne Mae	(Ex-M)	Portage la Prairie
Hardie, Jean	(U)	Winnipeg
Harris, Florence Ada	(U)	Winnipeg
Harris, William Wilbert	(St. J)	Arcola, Sask.
Hart, Ruth Elizabeth	(W)	Winnipeg
Harvey, Lucy Gladys	(U)	Winnipeg
Haryett, Reta Maud	(W)	Lanigan, Sask.
Haywood, George	(U)	Winnipeg
Headlam, John Morley	(St. J)	Winnipeg
Hillman, Maurice Saul	(U)	Winnipeg
Hopper, Gertrude Annie	(U)	Winnipeg
Hoole, Marjorie Aitkin	(U)	Winnipeg
Houle, Albert J.	(St. B)	St. Isidore de Bellevue, Sask.
Hrudka, Andrew	(Ex-M)	Senkiw
Innes, Woonona Mary	(U)	Norwood
Ives, Evangeline Hope	(U)	Winnipeg
Jalbert, Leon	(St. B)	Fort Frances, Ont.
Jardine, Tessie Mary	(W)	Crystal City
Jenkins, Cecil Herbert	(U)	Winnipeg
Johnson, Jon R.	(W)	Winnipeg
Johannson, Jonas Walter	(W)	Winnipeg
Johnston, Edward	(U)	East Kildonan
Johnston, Myrtle Lucinda	(U)	Winnipeg
Kaplan, Anne	(U)	Winnipeg
Kerr, Annie Harriett	(U)	Winnipeg
Kristjanson, Wilhelm	(W)	Otto
Lafreniere, Hector	(St. B)	St. Boniface
Leslie, Phyllis Olive Grace	(U)	Melita
L'Heureux, Aimé	(St. B)	Winnipeg
Lindsay, Mrs. Violet	(Ex-M)	Winnipeg
Lobb, Ruby Elizabeth	(U)	Winnipeg
Long, Florence Isabella Mary	(U)	Winnipeg
Longman, Alfred Duncan	(W)	Deloraine
Lynde, Carleton Warner	(U)	Winnipeg
Macdonald, Edythe Gwendolyn	(Ex-M)	Portage la Prairie

Name	*College*	*Address*
Macintyre, Frances	(U)	Winnipeg
Mackay, Martin Hugh	(U)	Winnipeg
MacLean, Dorothy Margaret	(U)	Winnipeg
Mansur, David Ball	(St. J U)	Winnipeg
Markovitch, Sam H.	(Ex-M)	Winnipeg
Martin, Jane A.	(Ex-M)	Winnipeg
Mattson, Chas. Willard	(U)	Winnipeg
Mattson, Warren Nelson	(U)	Winnipeg
Maybee, Wilfred Morgan	(U)	Winnipeg
McCarthy, Thos. Gerald	(Ex-M)	Portage la Prairie
McClure, Alexandra Clow	(U)	Carman
McCulloch, Margaret	(U)	Winnipeg
McCulloch, William Douglas	(U)	Winnipeg
McDonald, Gertrude L.	(U)	Winnipeg
McEwan, Sanger Duncan	(St. J)	Areola, Sask.
McIntosh, Hector	(U)	St. James
McIntyre, Lillian	(U)	Winnipeg
McIrvine, Charles Asbury	(W)	Winnipeg
McKay, Alice Christina	(Ex-M)	Portage la Prairie
McLachlan, Gordon James	(U)	Winnipeg
McLean, Edith Amy	(W)	Hamiota
McLean, Lena P.	(W)	Killarney
McLean, Mary E.	(W)	Killarney
McLellan, Isabel	(U)	Winnipeg
McMillan, Kathleen Margaret	(W)	Winnipeg
McNeill, James Edward	(U)	Roblin
McQueen, Thomas Craig	(U)	Pembina, N.D.
Messinger, Le Roy W.	(U)	Wartime
Metcalfe, Florence Elizabeth	(Ex-M)	Portage la Prairie
Metcalfe, Ross	(Ex-M)	Portage la Prairie
Monteith, Barbara Helen	(U)	Winnipeg
Morrow, Stanley	(St. J)	Edgerton, Alta.
Mowatt, John Alexander	(U)	Gladstone
Mutch, George S.	(U)	Crystal City
Netherton, Thelma Leone	(W)	Minitonas
Obirek, John	(St. B)	Cook's Creek
Ormond, Daniel Stewart	(U)	Winnipeg
Osborne, Joan Somerset	(U)	Winnipeg
Ostenso, Barney	(U)	Winnipeg
Osowsky, Dorothy	(U W)	Winnipeg
Pace, Frederick Cecil	(U)	Winnipeg
Parent, Ambroise	(St. B)	Winnipeg
Parrott, Robert William	(U)	Carman
Paul, Alfred J.	(U)	St. Boniface
Peacock, G. Maxwell	(W)	Winnipeg
Peter, Dorothea Clarissa	(W)	Newdale
Piché, Arthur	(St. B)	Gravelbourg, Sask.
Poucher, Maybelle	(U)	Winnipeg
Pratt, Frank Hamlet	(St. J)	Shaunavon, Sask.
Preece, James Charles	(Ex-M)	Portage la Prairie
Pucniak, Joseph	(St. B)	Winnipeg
Purcell, Gillis Philip	(St. B)	Winnipeg
Rendall, Margaret Elizabeth Olive	(W)	Winnipeg
Riddell, Everatt J.	(W)	Holland
Riddell, Laura Willard	(W)	Holland
Ritchie, Stuart	(Ex-M)	Portage la Prairie

Name	*College*	*Address*
Ritz, Doris Mabel	(U)	Winnipeg
Robertson, Flora McLean	(W)	Winnipeg
Robertson, Helen Christina	(U)	Treherne
Robison, Ivan Campbell	(W)	Carman
Roe, Irene Annie	(Ex-M)	Portage la Prairie
Roe, Wilson Robert	(Ex-M)	Portage la Prairie
Romanchych, Annie	(U)	Dauphin
Ross, Berythe Margret Wallace	(W)	Winnipeg
Roy, Germain	(St. B)	St. Boniface
Runchey, Mona Vivian	(St. J.)	Winnipeg
Rundle, Frances Alberta	(U)	Winnipeg
Saunderson, Hugh Hamilton	(U)	Winnipeg
Scott, Jean Margret	(U)	Winnipeg
Scott, William Alan	(Ex-M)	Portage la Prairie
Sigurdson, Fanny	(W)	Foam Lake, Sask.
Sigurdsson, Stefania	(U)	Gimli
Silberfarb, Samuel	(U)	Winnipeg
Simpson, Charles Murray	(U)	Winnipeg
Sloane, Dorothy Margaret Bethune	(U)	Winnipeg
Smith, Kate Albertina	(St. J)	Baldur
Smith, Francis Hartley	(U)	Winnipeg
Sodomsky, Samuel	(U)	Winnipeg
Spivak, Malick	(U W)	Winnipeg
Stewart, Edith M.	(U)	Treherne
Stinson, Vera Elizabeth	(U)	Pipestone
Strachan, Dorothy	(W)	La Vallee, Ont.
Sturrick, Helen	(U)	Winnipeg
Swanton, Adrian Llewellyn	(U)	Rosewood
Taillon, Rodrique	(St. B)	Grayson, Sask.
Taylor, Arthur James	(St. J)	Winnipeg
Taylor, Ralph Rutledge	(Ex-M)	Portage la Prairie
Tessler, Nena	(U)	Winnipeg
Tetrault, Laurent	(St. B)	La Broquerie
Thexton, Margaret	(U)	Winnipeg
Thompson, Donald A.	(St. J)	Winnipeg
Thompson, Sigmundur	(W)	Langruth
Tidsberry, Mildred Mary	(Ex-M)	High Bluff
Todd, William	(U)	Hamiota
Topper, Emily Joyce	(U)	Winnipeg
Treble, Verda Viola	(W)	Crystal City
Tremblay, Romeo	(St. B)	Courval
Udow, Clarice	(U)	Winnipeg
Usher, Janet Wilkie	(U)	Carman
Ward, Campbell A.	(U)	Winnipeg
Ward, Jean Louise	(Ex-M)	Portage la Prairie
Wark, Nellie Helena	(W)	Minto
Weir, Jean Margaret	(Ex-M)	Portage la Prairie
Wemyss, Norma Margaret	(U)	Neepawa
West, Dorothy Martyn	(Ex-M)	Portage la Prairie
Westgate, Reginald Wilfred	(St. J)	Winnipeg
Whimster, Henry Murdoch	(W)	Hamiota
Whitbread, Frank George	(U)	Winnipeg
Wilkie, John Macgregor	(U)	Winnipeg
Willson, John Harper Lee	(U)	Winnipeg
Wilson, Corinne Florence	(U)	Winnipeg
Winning, Enid Rachel	(W)	Berton

Name	*College*	*Address*
Young, Finlay MacNaughton	(U)	Winnipeg
Young, Ross Dalgleish	(U)	Winnipeg
Zaslavsky, Morris	(U)	Winnipeg

Second Year Arts

Abbott, Melwyn Wesley	(W)	Winnipeg
Adamson, Patricia A.	(W U)	Winnipeg
Andrew, Annie E. M.	(W)	Hamiota
Andrew, Florence Estella	(W U)	Hamiota
Armstrong, Flora Stewart	(U)	Winnipeg
Arnason, Gudmundur	(Ex-M)	Oak Point
Babb, Chas. Ralph	(U)	Winnipeg
Bain, Catherine Flora	(U)	Winnipeg
Baker, William Franklin	(W U)	Crystal City
Baldwin, Rae	(W)	Winnipeg
Benoit, Henri	(St. B)	St. Jean, P.Q.
Beuglet, Delphine	(Ex-M)	St. Boniface
Bilasz, Nicholas	(St. J U)	Winnipeg
Bickle, Warner P.	(W)	Portage la Prairie
Blakeman, Gordon Mills	(U)	Winnipeg
Blakeman, Ida Effie	(U)	Winnipeg
Blatt, Maurice	(U)	Winnipeg
Boissey, Ernest	(St. B)	Letellier
Boiteau, Caroline	(Ex-M)	Winnipeg
Bokofsky, J.	(U)	Winnipeg
Boughton, Winnifred Dorcas	(St. J)	Winnipeg
Bradley, Clarence Walton	(U)	Manitou
Brock, Clifford Wallace	(U)	Winnipeg
Bruce, Donald Sinclair	(St. J)	Winnipeg
Buhr, Peter S.	(W)	Gretna
Bullied, Ernest Alfred	(W U)	Holland
Campbell, Jessie McLean	(U)	Winnipeg
Coulter, Andrew Robert	(W)	Swan River
Carefoot, Harriet Marjory	(W)	Arcola, Sask.
Clark, Leonard B.	(U)	Winnipeg
Cobban, Edna Hazel	(U)	Winnipeg
Cooper, Mabel	(W)	Souris
Couture, Emile	(St. B)	St. Jean Baptiste
Croslands, Cecil George	(U)	Portage la Prairie
Dafoe, Elizabeth	(U)	Winnipeg
Dafoe, Marcella Parmelee	(U)	Winnipeg
Dandy, Eric Ferguson	(U)	Winnipeg
Dawson, John	(U)	Portage la Prairie
Dennison, John Hoyle	(W U)	Newdale
Deyell, James Robert Victor	(U)	Alameda, Sask.
Dick, Robert Lawrence	(U)	Winnipeg
Dinwoody, Dickson Victoria	(U)	Winnipeg
Drew, Richard Cecil	(U)	Regina, Sask.
Dubnov, Annie	(Ex-M)	Winnipeg
Dyer, Janet Gordon	(U)	Winnipeg
Dolmage, Ewart R.	(W)	Souris
Ferguson, Orlo Grace	(U)	Winnipeg
Flatt, Beryl	(W)	Winnipeg
Ford, Mona Gray	(Ex-M)	St. Boniface
Fraser, Jack McCulloch	(U)	Winnipeg

Name	*College*	*Address*
Frossais, Pierre A.	(St. B)	St. Boniface
Gauthier, Adela	(Ex-M)	St. Boniface
George, Neva Alice	(W)	Swan River
Gilbert, Helen Elizabeth	(U)	Winnipeg
Glover, Redvers Sennis	(St. J)	Boissevain
Golden, Harvey	(U)	Winnipeg
Gordon, Mary Robertson	(U)	Winnipeg
Graham, Ida Christina	(U)	East Kildonan
Graham, James H	(U)	Winnipeg
Gray, Alan McArthur	(U)	Winnipeg
Hall, Gwendolen	(U)	Winnipeg
Hamilton, Jean Vivian	(U)	Winnipeg.
Harvie, Allison Rutherford	(U)	Winnipeg
Harvey, Reginald Llewellyn	(Ex-M)	Calgary, Alta.
Harrison, William Elliott	(St. J U)	Winnipeg
Hicks, Maisie	(U)	Winnipeg
Hill, Edward Albert	(W U)	Norwood
Hinton, Robert Parr	(U)	Winnipeg
Hoole, Arthur Herbert	(Ex-M)	Shoal Lake
Jackson, Claire	(U)	Winnipeg
James, Francis Edward Howley	(W U)	Winnipeg
Johnson, Jon Rognar	(W)	Winnipeg
Johnson, Rosa	(Ex-M)	Stony Hill
Johnston, Edward	(U)	East Kildonan
Johnston, Verda Irene	(U)	Winnipeg
Kahanovitch, Fred	(U)	Winnipeg
Kay, Eileen Hazel	(U)	Winnipeg
Keit, Ruth	(U)	Winnipeg
Kelpin, Marguerite	(U)	Stony Mountain
Kerr, Charles Philip	(U)	Hamiota
Lanctot, Jean Baptiste	(St. B)	Crookston, Minn.
Lawson, Joseph William	(U)	Winnipeg
Leach, Hubert Frank	(Ex-M)	Tisdale, Sask.
Lee, Anna Alberta	(W)	Souris
Lillis, John Frederick	(U)	Broadview, Sask.
Lloyd, William	(Ex-M)	Langbank, Sask.
Mackay, Agnes	(U)	Winnipeg
Magnusson, Agnar Rae	(W)	Winnipeg
Malisky, Omer Emil	(U)	Ranfurly, Alta.
Marion, Elisa	(Ex-M)	St. Boniface
Marion, Marie Antoinette	(Ex-M)	St. Boniface
Marteinsson, Gudrun A.	(W)	Winnipeg
Martin, Jane	(Ex-M)	Winnipeg
Mathieson, John Chas.	(U)	Winnipeg
Maynard, J. Edward	(W U)	Deloraine
Medovy, Harry	(U)	Winnipeg
Millar, Walter	(U)	Portage la Prairie
Mooney, Eva Estelle	(W)	Elkhorn
Moore, Alan Stewart	(St. J)	Winnipeg
Montgomery, Jean Gibson	(U)	Virden
McBrien, David Leslie	(U)	Crystal City
McCuaig, Janet Catherine	(U)	Minto
McCord, Margaret E.	(U)	Winnipeg
McDonald, Hazel Alexina	(W)	Hartney
McFadden, James Alexander	(U)	Stony Mountain
McIntyre, Lorne Albert	(U)	Winnipeg

Name	*College*	*Address*
McKenty, Phyllis	(U)	Winnipeg
McLean, Wilson Edward	(U)	Winnipeg
McLeod, Daniel Robert	(U)	Dauphin
McLachlan, Edith May	(U)	Stockton
McLachlin, Mona Mary	(W U)	Dauphin
McNiven, Bessie Jean	(U)	Virden
Popoff, Russell Eldon	(U)	Yorkton, Sask.
Powlotsky, Jacob	(U)	Buchanan, Sask.
Poyntz, James	(St. J)	Kilmore, Cavan, Ireland
Pratt, Edward W. E.	(St. J)	Shaunavon, Sask.
Robinson, Dorothy Grace	(W U)	Stonewall
Ross, Fred Herbert	(Ex-M)	Kennedy, Sask.
Ross, Jessie McLean	(U)	Selkirk
Ross, Katherine McIntyre	(U)	Selkirk
Russell, John William	(U)	Winnipeg
Ryan, Catherine	(U)	Winnipeg
Ryan, Ethel Mary	(U)	Winnipeg
Ryan, Joseph B.	(St. B)	Winnipeg
Saper, Solomon	(U)	Yorkton, Sask.
Saunderson, Frederic Du Val	(U)	Winnipeg
Schwitzer, Edna	(U)	Winnipeg
Scott, William Morpeth	(U)	Winnipeg
Seale, Edris Louise	(St. M's A)	Winnipeg
Sigurdson, Fanny	(W)	Foam Lake, Sask.
Sigurdsson, Kristjan Bergthor	(W)	Otto
Staes, Frank	(St. B)	St. Charles
Stefansson, Halldor J.	(W)	Elfros, Sask.
Stovel, Florence Eileen	(U)	Winnipeg
Strumfjord, Jon Vidalin	(W)	Lundar
Strindlund, Lawrence Wilfred	(U)	Winnipeg
Taylor, John Montague	(St. J)	Winnipeg
Thexton, Harvey Haight	(U)	Winnipeg
Thorsteinson, Daniel	(W)	Sturgeon Creek
Tonks, John Charles	(Ex-M)	Canmore, Alta.
Trueman, Alan Stanley	(St. J U)	Winnipeg
Vopnfjord, Axel	(W)	St. James
Waldon, Elva Inez	(U)	Winnipeg
Wallace, James Mawer	(U)	Winnipeg
Warwick, Arthur Herbert	(St. J)	Pelican Rapids
Weller, Elizabeth	(U)	Winnipeg
Whimster, Mary Louise	(U)	Hamiota
Williams, Arthur Elmhurst	(St. J)	Weyburn, Sask.
Wilson, Dorothy Agnes E.	(U)	Winnipeg
Wilson, John Osborne	(U)	Virden
Wilson, Marguerite	(U)	Winnipeg
Winkler, Josephine Rombough	(U)	Winnipeg
Winters, Peter F.	(U)	Winkler
Wolvin, Roy Edwin	(St. J)	Port Arthur, Ont.
Wright, Frederick Bennett	(St. J)	Swan River
Wright, Virginia	(U)	Winnipeg
Yaffa, Hyman	(U)	Winnipeg
Young, Duncan Harry	(U)	Winnipeg
Young, Norman Andrew Thomson	(U)	Winnipeg
Yule, Mary Belle	(W)	Killarney
Yustin, Dorothy Anna	(U)	Winnipeg

SPECIAL COURSE FOR TEACHERS

Second Year Arts

Name	*Address*
Baker, Dora Lilian	Winnipeg
Bartlett, George Wesley	Eriksdale
Baxter, Duncan Alex.	Transcona
Beckstead, James Ogel	Boissevain
Bell, Margaret J.	Winnipeg
Best, Edward Ernest	Winnipeg
Beveridge, W. R.	Virden
Blackwell, George Henry	Stony Mountain
Cresswell, Chas. Trevelyan	Elkhorn
Cumming, Hugh Duncan	Teulon
Evans, William Ambrose	Kemnay
Fallis, Allan B.	Neepawa
Finn, T. Grant	Morden
Gordon, Joseph William	Manitou
Gough, Walter Thomas	Winnipeg
Hall, Ethel May	Winnipeg
Herriot, Archibald Adam	Gladstone
Hunter, George	Deloraine
Jose, Walter Card	Wawanesa
MacManus, Mary Louise	Cardale
Martin, William	Winnipeg
McBeth, Margaret E.	West Kildonan
McCann, C. M.	Winnipeg
McIntyre, Blanche	La Riviere
McKnight, Lela Helen	Winnipeg
Montgomery, Jennie	Stonewall
Morrison, James Boyd	Hamiota
Newton, Kathleen Fawcus (Mrs.)	Winnipeg
Parker, Elbridge Doty	Sturgeon Creek
Peach, John Sawford	Swan River
Plewes, James Humphrey	Foxwarren
Robertson, Geo. K. H.	Neepawa
Rogers, Clifford Knox	Glenboro
Staples, Lila R.	Winnipeg
Suttis, Laura	Starbuck
Tod, James	Ashern
Tufts, Norman Benson	Carman
Wallis, John Braithwaite	Winnipeg
Willows, Andrew	Winnipeg
VanDusen, Washburne	Stonewall

Third Year Arts

Name	*College*	*Address*
Abremovitch, Lawrence Elbert	(U)	Winnipeg
Anderson, Arthur Edward Oswald	(U St. J)	Brandon
Archibald, Ralph George	(U)	Hazelridge
Arnason, Gudmundur	(Ex-M)	Oak Point
Averbach, Meyer	(U)	Winnipeg
Bannerman, Helen Jean	(U)	Sydney, N.S.
Baril, Antonio	(St. B)	St. Boniface
Beavis, Amy Myrtle	(U)	Crystal City

Name	*College*	*Address*
Bernier, Raymond	(St. B)	St. Boniface
Booke, Sam	(U)	Winnipeg
Borm, Agate	(U)	Winnipeg
Brown, Alda Jeanette	(U)	Minnedosa
Cairns, Helen Frances	(U)	Winnipeg
Calof, Rockmil	(U)	Winnipeg
Cardin, Victor	(St. B)	Crookston, Minn.
Caswell, Kathleen	(U)	Winnipeg
Chataway, Helen Drinkwater	(U)	Winnipeg
Cole, Rhoda	(U)	Gainsborough, Sask.
Crandall, Catherine Alice	(U)	Winnipeg
Creighton, Vera Youmans	(Ex-M)	Alameda, Sask.
Crookshanks, Doris Allegra	(W U)	Ninga
Davey, Dorothy May	(U)	Selkirk
Davis, Marjorie Langdon	(W U)	Neepawa
Decosse, Aimé	(St. B)	Somerset
Delgaty, William George	(U)	Treherne
Dempsey, Samuel James	(W U)	Neepawa
Dixon, Earl Stanley	(W)	Hamiota
Dowker, George Hasted	(U)	Winnipeg
Duncan, Elmir Jay Harwood	(Ex-M)	Lumsden, Sask.
Eaton, Egerton R.	(U)	Winnipeg
Einarson, Holmfridur S.	(Ex-M U)	Mary Hill
Everall, Henry John	(Ex-M)	Roblin
Fares, Merle Marion	(U)	Winnipeg
Gibson, Marion H.	(U)	Winnipeg
Graham, Matthew Ernest	(Ex-M)	Sylvan
Griffin, Gordon Nathaniel	(Ex-M)	Rouleau, Sask.
Harris, Blanche Farmel	(St. J)	Arcola, Sask.
Helgason, John S.	(W)	Morden
Hetherington, Ruth Beatrice	(W)	Winnipeg
Hickson, Beulah	(U)	Winnipeg
Holloway, Kathleen Emma	(U)	Winnipeg
Holtby, Dorothy Mary	(U)	Norwood
Hooper, Mary Kennedy	(U)	Winnipeg
Howden, Norman C.	(St. J)	Neepawa
Huddleston, William	(Ex-M)	Hodgson
Hughes, Robert Frederick	(U W)	Newdale
Jerrard, Muriel Fay	(U)	Winnipeg
Johnson, Arthur Wallace	(U St. J)	Winnipeg
Johnson, Emma Laura	(U W)	Winnipeg
Kennedy, Norma Claire	(U)	Winnipeg
Laidlaw, Annie Glendinning	(U)	Winnipeg
Lindal, Mrs. H. J.	(U)	Winnipeg
Marcoux, Gabriel	(St. B)	St. Boniface
Marcovitch, William	(U)	Cupar, Sask.
Mills, Evelyn V.	(W)	Swan River
Moore, Elizabeth MacDonald Miller	(U)	Winnipeg
Motley, Edith Bertha	(U)	Winnipeg
Muller, Celestin	(St. B)	St. Boniface
Murray, Wilfred Crothers	(U)	Winnipeg
McBean, Myrtle Jean	(U W)	Winnipeg
McEachran, Stephen	(St. B)	St. Boniface
MacLeod, Florence	(U)	Winnipeg
McNaught, Eva Ross	(U)	Rapid City

Name	*College*	*Address*
McQuillin, Clarence Winston	(U)	Winnipeg
Ostry, Ethel	(U)	Winnipeg
Parent, Florentine	(U)	Winnipeg
Parent, Aimé G.	(St. B)	Letellier
Petty, Thomas	(Ex-M)	Steep Rock
Portigal, Elsie	(U)	Winnipeg
Prefontaine, Edward	(St. B)	St. Pierre Jolys
Puttee, Winnifred	(U)	Winnipeg
Ramsey, Ella Murielle	(M U)	Dauphin
Roe, John Mackney	(Ex-M)	Winnipeg
Rutledge, Elmenia	(U W)	Winnipeg
Schoenau, Kathleen	(U)	Humboldt, Sask.
Severin, Frederic Holger William	(U St. J)	Winnipeg
Sigurjonsson, J. E.	(W. U)	Winnipeg
Smith, Henry Gordon Harvey	(U)	Winnipeg
Smith, Kathleen Mulvey	(U)	Winnipeg
Somerville, Neva May	(U)	Winnipeg
Spry, Graham	(U)	Calgary, Alta.
Stein, Harry	(U)	Winnipeg
Telfer, Luella May	(U W)	Winnipeg
Thorlakson, Edward Julius	(U W)	Calder, Sask.
Tod, Charlotte	(U)	Winnipeg
Topper, Ida Beth	(U)	Winnipeg
Trumpour, Myrtle Gertrude	(U Ex-M)	Winnipeg
Wilkinson, John James	(Ex-M)	Winnipeg
Williams, Arthur Lennox	(U)	Carlyle, Sask.
Whiteford, Olive Agnes	(W)	Manitou
Whiteford, Myrtle V.	(W)	Manitou
Whitmore, Ella A.	(U)	Winnipeg
Whyte, Doris Elizabeth	(U)	Winnipeg

Fourth Year Arts

Allingham, Clara Margaret	(U W)	Broadview, Sask.
Alton, Herbert Edward	(U)	Winnipeg
Andrews, Wilbur Edgar	(W U)	Winnipeg
Arnason, Ingolfur Gilbert	(W)	Winnipeg
Arthur, Joseph	(U)	Elmwood
Austin, Winifred Gladstone McC	(U)	Winnipeg
Best, Christopher Thomas	(Ex-M)	Winnipeg
Bodanis, Rose Frances	(U)	Winnipeg
Broadfoot, Ina Isobel	(U)	Gladstone
Bryce, Helen Forbes	(U)	Winnipeg
Cameron, Alice	(U)	Vancouver, B.C.
Clark, John Neville	(U W)	Borden, Sask.
Churchill, Gordon Minto	(U W)	Brandon
Coade, Errol Noble	(U)	Rouleau, Sask.
Champagne, Leonce	(St. B)	St. Norbert
Collins, Leo Hugh	(St. B)	Broadview, Sask.
Coppleman, Archie	(U)	Lockport
Cross, Eva Alice	(U)	Winnipeg
Davidson, Ida Marion	(U)	Winnipeg
Dawson, George W.	(St. J)	Winnipeg
Diner, Nathan	(U)	Winnipeg
Dufort, Alphonse	(St. B)	St. Norbert
Ellis, Anne Ethelwyn	(U)	Winnipeg

Name	*College*	*Address*
Enright, Florence Anna	(U)	Winnipeg
Ferguson, Eva M.	(W)	Dauphin
Fleming, Margaret Davidson	(U)	Winnipeg
Fletcher, J. Gordon	(U)	Winnipeg
Fraser, Roy Hamilton	(U St. J)	Winnipeg
Hall, John Henry	(Ex-M)	Garland
Hazelwood, Myrtle M.	(W U)	Sturgeon Creek
Heeney, Arnold Danford	(U)	Winnipeg
Hoffer, Peter	(U)	Winnipeg
Isaac, William John	(U)	Winnipeg
Johnston, Harry	(U)	Winnipeg
Kahana, Joseph	(U)	Winnipeg
Kenzie, Walter A.	(U)	Winnipeg
Korczynski, John	(St. B)	Ituna, Sask
LaFleche, Camille	(St. B)	St. Charles
Lamont, Winnifred Margaret	(U)	Treherne
Lemay, Eugene	(St. B)	St. Boniface
Longmore, Roderick Hector	(U St. J)	Carman
Lovell, Mildred Agnes	(U)	Winnipeg
Mackay, Dorothy	(U)	Winnipeg
Matheson, Agnes Eleanor	(U St. J)	Winnipeg
Mills, Albert Livingstone	(W U)	Swan River
Mills, Elsie Dorothy	(U)	Winnipeg
Monteith, Mary Constant	(U)	Killarney
Mutch, Leslie A.	(U)	Crystal City
McCartney, Roy C.	(W)	Norwood
McGregor, Isobel Cranstoun	(U)	Birds Hill
McIntosh, George Thomas	(U)	Winnipeg
Nason, Lizetta Randle	(U)	Winnipeg
Newman, Frank Wright	(U)	Portage la Prairie
Norton, Miriam	(U)	Winnipeg
O'Brien, Catherine	(Ex-M)	Winnipeg
Pearl, Solomon	(Ex-M)	Toronto, Ont.
Pritchard, Charlotte Lilian	(U)	Winnipeg
Robertson, Anna	(U)	St. Vital
Robertson, Hugh Alexander	(U)	Holland
Rosevear, Marion	(U)	Winnipeg
Robins, George Ernest	(Ex-M)	Dryden, Ont.
Roxburgh, James Maxwell	(Ex-M)	Fort Saskatchewan, Alta.
Rumball, Wilfrid G.	(U)	Winnipeg
Sanger, Maurice	(Ex-M)	Winnipeg
Saunders, Doris Boyce	(U)	Winnipeg
Shere, Louis	(U)	Winnipeg
Sinclair, Burton Leslie	(U)	Stonewall
Smith, Bernice Aveline	(U)	Winnipeg
Solmundsson, Johann Pjetur	(U)	Gimli
Stewart, William Murray	(W U)	Brandon
Talbot, Mary Marjorie	(W U)	Winnipeg
Treble, Cecil D.	(U)	Crystal City
Trohak, Joseph	(St. B)	Stockholm, Sask.
Truesdale, Beatrice D.	(U)	Winnipeg
Turnbull, John	(U)	Winnipeg
Valgardsson, Valentinus	(U)	Gimli
Weinberg, Mollie	(U)	Winnipeg
Wintrobe, Maxwell Myer	(U)	Winnipeg

Special Students in Arts

Name	*College*	*Address*
Aikins, Mary Alberta Helena	(U)	Winnipeg
Arkin, Jack I.	(U)	Calgary, Alta.
Armstrong, Willard F.	(W U)	Winnipeg
Bailey, Frank W.	(U)	Norwood
Bell, Nora Ellen	(U)	Winnipeg
Bunnell, Ombra Chisholm	(U)	Winnipeg
Callaghan, Frances T.	(U)	Elmwood
Cameron, John D.	(U W)	Winnipeg
Collins, Leo H.	(U)	Broadview, Sask.
Dainton, Archibald Stanley	(U St. J)	Winnipeg
Dawson, John	(U)	Portage la Prairie
Downie, Donald Henry	(U)	Winnipeg
Fears, Frank T.	(U)	Delisle, Sask.
Forhan, Mabel C.	(U)	Winnipeg
Friedman, Victor	(U)	Camper
Gordon, John K.	(U)	Winnipeg
Halter, Gerald S.	(U)	Winnipeg
Holmes, Wm.	(U)	Greenock, Scotland
Lillis, Emmie M.	(W)	Broadview, Sask.
Lindsay, Isabel Gertrude	(U)	Winnipeg
Linkletter, Arthur C.	(U)	Summerside, P. E. I.
Mitchell, William	(M)	Glasgow, Scotland
Moffat, Ernest L.	(W)	Lakeland..
Murray, John A.	(W)	Winnipeg
McCrae, Dorothy	(W)	Hearne, Sask.
McShane, Muriel Jean	(U)	Souris
Nicholson, Annie Ethelwyne	(U)	Winnipeg
Parlee, Helen Victoria	(U)	Winnipeg
Phillips, Stuart	(U)	Winnipeg
Riley, Florence J.	(U)	Winnipeg
Rogers, Phyllis Grace	(U)	Winnipeg
Smellie, Catherine Isabelle	(U)	Russell
Stinson, Kathleen V. F.	(U)	Winnipeg
Upham, Bessie M.	(U)	Drayton, N. D.
Waters, Gladys	(W)	Caron, Sask.
Winters, Peter F.	(U)	Winkler, Ont.

Accountancy Students in Special Arts

Name	*Address*
Armstrong, David	Winnipeg
Cawley, Robert I.	Winnipeg
Craig, Arthur	West Kildonan
Dunn, Garnet W.	Winnipeg
Finnemore, Herbert W.	Winnipeg
Goldstein, I.	Winnipeg
Gould, William A.	Norwood
Hansen, W. John	Winnipeg
Hare, George B.	Winnipeg
Holloway, John D.	Winnipeg
McCartney, Cecil I.	Winnipeg
McQuaker, J. A.	Winnipeg
Mathews, Harold Whitehouse	Winnipeg
Patrick, Wm. Mitchell Pringle	Winnipeg
Sharp, Harry	Winnipeg

Name	*Address*
Steel, John M.	Winnipeg
Towell, Sydney	Winnipeg
Tibbs, Fred	Winnipeg

MASTER OF ARTS

Argue, Robert Fletcher	Winnipeg
Barbour, Harold Douglas	Winnipeg
Barrett, Mrs. Ruth Tate	Winnipeg
Bedard, Beatrice	Winnipeg
Bell, Nora Ellen	Winnipeg
Broatch, Angus Campbell	Winnipeg
Brotman, Ernest A.	Winnipeg
Bucknam, Hazel	Norwood
Carey, Harold Eric	Winnipeg
Chapman, Frederick Colbourne	Morden
Daigneau, Lillie G.	Winnipeg
Edwards, Nellie	Victoria, B.C.
Ellis, Alice K.	Winnipeg
Erickson, John	Langruth
Fallon, Catherine M.	Winnipeg
Gordon, John King	Winnipeg
Greer, Irene	Winnipeg
Harvey, Howard Graham	Winnipeg
Hill, Joseph Harrison	Griswold
Hollenberg, Michael S.	Winnipeg
Laberge, Georgine	Winnipeg
Mitchell, Arthur Hill Gilmore	Cartwright
Moody, Edith A. M.	Winnipeg
Muldrew, Alfred William	Winnipeg
Pigott, Arthur V.	Winnipeg
Ridd, Dwight Nugent	Gladstone
Riter, Harold Elwin	Winnipeg
Robertson, Lisbeth	Indore, Central India
Ross, Beulah Arnold	Winnipeg
Sanger, Maurice	Winnipeg
Shannon, Simon	Winnipeg
Skafel, Einar Jonsson	Mozart, Sask.
Smith, Edwin Neil	Winnipeg
Tomkins, Herbert James	Winnipeg

SCIENCE

First Year

Name	*Address*
Blackett, Douglas W. H.	Winnipeg
Childerhose, Allan Jerome	Winnipeg
Ferguson, Marion H.	Winnipeg
Finn, Donovan B.	Winnipeg
Hiebert, Rudolf W.	Winnipeg
Hutt, Gordon McLean	Winnipeg
Macdonald, Patrick A.	Winnipeg
Morton, Janet Gibson	St. James
Smith, Charles Gordon	Winnipeg
Watson, Herbert Arthur	Winnipeg
Zwicker, Ralph Bell	Winnipeg

Second Year

Name	*Address*
Brownell, George M.	Winnipeg
Clare, Norval D.	Neepawa
Epstein, Myer	Winnipeg
Eisenstein, Samuel	Winnipeg
Finkelstein, Herbert D.	Winnipeg
Fleming, Allan James	Winnipeg
Graham, Harold M.	Hartney
Hannesson, Hannes	Selkirk
Ostry, Harry	Winnipeg
Perilmuter, William	Winnipeg
Sigvaldson, Johann M.	Winnipeg
Waddell, Earl Hamilton	Sperling

Third Year

Gibson, Catherine C.	Kelloe
Herron, Albert L.	Winnipeg
Hiebert, Rudolf W.	Winnipeg
Hughes, Frank R.	Newdale
Mar, Peter	Winnipeg
Morgan, Catherine	Winnipeg
Turnbull, Margaret	Winnipeg
Yarwood, Walter S.	Shanawan

Fourth Year

Hennell, Leo	Winnipeg
Johnson, William Penn	Brandon
Lipshitz, Solomon G.	Winnipeg
McHaffie, Ivan Roy	Swan River
Merritt, Clifford A.	Winnipeg
Moore, Andrew	Treherne

Special Students in Science

Bulman, M. Eileen	Winnipeg
Hiebert, Paul G.	Winnipeg
Mounce, Irene	Winnipeg
Scott, Ida Kirk	Winnipeg
McCoubrey, A. A.	Winnipeg

LAW

First Year

Adams, George Griffin	Crystal City
Allison, James O'Neill	Winnipeg
Alsaker, Oscar S.	Pilot Mound
Barrett, Frank G.	Carberry
Bell, Wm. Edwin	Winnipeg
Bennett, Paul Bickley	Winnipeg
Brown, H. R.	Winnipeg
Campbell, Angus Howard	Stonewall
Carey, Ralph S.	Winnipeg
Chapman, George Thomas	Charleswood
Chalk, Frederick James	Winnipeg
Cowan, James Percival	Portage la Prairie
Cowan, John Grant	Portage la Prairie
Dick, Clifford Allen	Winnipeg
Dobbs, Conway Edward	Winnipeg

Name	*Address*
Douglas, Norman Brent	Dauphin
Elliott, Donald George	Pilot Mound
Evans, Frank Robert	Winnipeg
Freidgut, Abraham Hirsh	Regina, Sask.
Grantham, Ernest Norman	Brandon
Golosoff, Nathan	Neville, Sask.
Gutzke, Manford George	Morden
Hall, Gavin Allen	Ogilvie
Ham, Arthur Leslie	Winnipeg
Harris, Henry A.	Vancouver, B.C.
Hillhouse, Thos. Patterson	Winnipeg
Ibbetson, Percy Victor	Swan River
de Lucia, Marino	Bield
Marchant, Harold Leslie	Winnipeg
McLean, John Albert	Winnipeg
McPherson, John Sinclair	Courtney, B.C.
Moffat, Andrew Allison	Sanford
Murphy, Patrick	Winnipeg
Phinney, Lawrence H.	Winnipeg
Robinson, Homer Smiley	Winnipeg
Rosen, Sam	Winnipeg
Schweitzer, Valmore Eric	Portage la Prairie
Slater, Leo Arthur	Napinka
Smith, John Wilfrid	Gladstone
Sokolofski, Hyman	Winnipeg
Tobias, Wm. Verner	Winnipeg
Tritschler, George Eric	Dauphin
Tupper, Chas. William	Winnipeg
Van Vliet, George Lyman	Winnipeg
Wright, Thos. Greenway	Winnipeg
Zimmerman, Maxwell Norman	Winnipeg

Second Year

Atkinson, Thos. Harold	Winnipeg
Barbour, Harold Douglas	Winnipeg
Carey, Harold Eric	Winnipeg
Chanter, Joseph Gillyard	Winnipeg
Cousley, Glynn Lloyd	Gladstone
Cuddy, William Alexander	Sanford
Davies, Sydney Lloyd	Winnipeg
Field, Samuel Benjamin	Winnipeg
Gunn, William Gordon	West Kildonan
Harvey, Howard Graham	Winnipeg
Higginbotham, John Leonard	Winnipeg
Johnson, Fridjon	Winnipeg
Kelly, John Joseph	Thornhill
Killeen, Francis Joseph	Winnipeg
Macdonell, Ambrose Roy	Winnipeg
Maybank, Harold Ralph	Winnipeg
McCrea, Roland Lawrence	Hearne, Sask.
Messner, Anthony McDonald	Winnipeg
Mitchell, Leland Shirley	Winnipeg
Monk, Andrew Biggam	Winnipeg
Mutch, Harvey George	Winnipeg

Name	*Address*
Nordquist, Geo. Ernest Ludwick	Miami
Perkins, James E.	Winnipeg
Ross, Donald Alexander	Devlin, Ont.
Stitt, James Herbert	West Kildonan
Straith, William Thomas	Victoria, B.C.
Streight, Harvey Newton	Winnipeg
Swail, R. W.	Winnipeg
Tobias, Herbert N.	Winnipeg
Willis, Errick French	Boissevain
Wilson, William Elliott	Winnipeg

Third Year

Name	*Address*
Allan, David Jeffrey	Winnipeg
Annis, Harold Ryerson	Winnipeg
August, William Howard	Winnipeg
Baldwinson, Edwin Gestur	Winnipeg
Barber, Charles Dawson Gordon	Winnipeg
Bass, Morris	Winnipeg
Bastin, Frank Martin	Winnipeg
Broadfoot, John Campbell	Winnipeg
Broatch, Angus Campbell	Moose Jaw, Sask.
Brotman, Ernest A.	Winnipeg
Christie, Augustus James	Winnipeg
Crook, William Henry	Winnipeg
Cross, Jesse Edward	Baldur
Deacon, Ivan J. R.	Winnipeg
Dixon, Charles Henry	Winnipegosis
Dubinsky, Boris	Winnipeg
Dennistoun, Robert Peel	Winnipeg
Driscoll, Wm. Edward	Winnipeg
Eggertson, Arni Gudni	Winnipeg
Gibben, John Edward	Winnipeg
Hannah, William James	Winnipeg
Henry, William Brock	Winnipeg
Hinch, Thos. Wilfred Bell	Carman
Jackson, Iva Bell	Winnipeg
Kay, Orville Montague Miles	Winnipeg
Lackman, Samuel	Winnipeg
Laidlaw, Thomas Walter.	Winnipeg
Loadman, Frank Ivan	Winnipeg
Long, Thos. MacKay	Winnipeg
Lye, Henry Arthur	MacGregor
Macleod, George P.	Winnipeg
McMurray, Mildred Beatrice	East Kildonan
Michell, David C. H.	Winnipeg
Moore, William Athol	Treherne
Murchison, Clifford Arthur L.	Norwood
O'Day, Brian J.	Winnipeg
Pennyfather, Thomas R.	Winnipeg
Popham, Earle Cameron	Winnipeg
Pritchard, Artemas Paul	Winnipeg
Ritchie, Francis Gordon	Winnipeg
Rogers, George Earle	Winnipeg
Rutherford, Alexander B.	Stonewall

Name	*Address*
Stewart, Charles Alexander	Regina, Sask.
Treleaven, John Clifford	Eaton, Sask.
Yakimischak, Dymtro	Pleasant Home

SENIOR MATRICULATION FOR ENGINEERING

Anderson, James Robert	Winnipeg
Barnes, Frederick Gilbert	Crystal City
Bowman, Alexander Page	Miami
Brockman, Alan	Selkirk
Bruce, Fritjof Byron	Winnipeg
Byas, Wilfrid Colin	Winnipeg
Cameron, Donald B.	Winnipeg
Campbell, Lorne Shelton	Winnipeg
Christie, Donald Romeo	Winnipeg
Christopherson, Helgi Olafur	Baldur
Clark, Chester Arthur	Winnipeg
Cornish, Wilfred Ernest	Weyburn, Sask.
Davies, Walter	Winnipeg
Dawson, Randolph	Winnipeg
Eggertson, Eggert Grettir	Winnipeg
Elliott, George Hosgood	Winnipeg
Elsasser, Fred	Winnipeg
Estlin, Frederick Ernest	Melita
Freeman, William	Winnipeg
Graham, James Davis	Winnipeg
Gray, Henry Alfred	Winnipeg
Greenberg, Abraham	Winnipeg
Hagborg, Helmer William	Winnipeg
Holden, Charles Kellett	St. James
King, John Arthur Richard	Winnipeg
Landry, Antoine	Mariapolis
Linton, Norman	Willmar, Sask.
Macdonald, James Herbert	Winnipeg
Mackay, Leslie Bartlett	Winnipeg
MacKenzie, John R.	Winnipeg
McCamis, John Graham	Arden
McDonald, James Howard	Deloraine
McKinnon, William Carmichael	Dauphin
McMillan, Hugh	Winnipeg
McNeil, Donald Gordon	Holland
McNicholl, John Edward	Winnipeg
Marion, Rosario	St. Boniface
Moore, Avard Vernon	Bridgetown, N.S.
Munro, Alan	Winnipeg
Nicolson, Earl Leask	Winnipeg
Payne, Harold	Winnipeg
Quelch, C. Stephen	Birtle
Robertson, Frederick Thomas	Holland
Robinson, Trevor A.	Winnipeg
Rodgers, Laurence A.	Winnipeg
Sherrin, Frank Alexander	Souris
Shilson, Lorimer B.	Roland
Short, Lyall B.	Shoal Lake
Sigurdsson, Larus Arthur	Gimli

Name	*Address*
Stanley, Howard Preston	Ripley, Ont.
Stevens, Walter Oscar	Winnipeg
Stewart, Ivan DesBrisay	Portage la Prairie
Stewart, John Archibald	Winnipeg
Storch, Rudolph Alexander	Winnipeg
Thorgeirson, Geir	Winnipeg
Whiteside, James Max	Carberry
Wildman, Kenneth	Winnipeg
Young, Dudley Stewart Alfred	Souris
Young, Ross Alexander	Neepawa

SENIOR MATRICULATION FOR MEDICINE

Abercrombie, Frank Edward	Carman
Adamson, Gilbert Logie	Winnipeg
Andrews, George Henry	Winnipeg
Atkinson, Velma Helen	Winnipeg
Bargen, Luella	Winnipeg
Beckwith, Lloyd Newcomb	Bickle, B.C.
Behrns, Russell Kelvey	Abernethy, Sask.
Black, Margaret	Winnipeg
Boyd, Frank Woodside	Winnipeg
Bristow, Morval E.	Kelwood
Burrows, Theodore Arthur	Winnipeg
Campbell, Robert William	Strathclair
Card, Dorothy Edith	Wallard, Sask
Carlisle, Edgar Abram	Winnipeg
Colwell, Marguerite Maud Bernice	Winnipeg
Cumming, Nathaniel Lyle	McCreary
Curran, Robert Emmett	Winnipeg
Dandenault, Auguste Gaston	St. Pierre
Dawson, Hilda Merle	Manitou
Diner, Joe	Winnipeg
Dwor, Eddie	Kenora, Ont.
Elvin, Norman Lewis	Winnipeg
Freeman, Daniel	Winnipeg
Frohman, Max	Winnipeg
Gerber, Koffman	Winnipeg
Golden, Boris	Winnipeg
Gordon, Neil Douglas	Winnipeg
Greenstone, Eddie	Winnipeg
Greer, Leonard	Winnipeg
Gussin, Julius Philip	Winnipeg
Henderson, Leonard Robert	Morden
Henry, John Robertson	Winnipeg
Holland, Thomas Edward	Dugald
Hollenberg, Joe	Neudorf, Sask.
Houston, Clarence Joseph	Tyvan, Sask.
Hutchinson, H. Harris	Winnipeg
Jackson, Norman Clifford	E. Kildonan
Jenkins, Gertrude Verne	Winnipeg
Jonsson, Eyjolfur	Winnipeg
Kerr, H. Fred	Winnipeg
Lamb, Ewart Herbert	Arden
Lawson, Gordon A.	Shoal Lake

Name	*Address*
Leviton, Albert Louis	Winnipeg
Lidster, Harold George	Elkhorn
Linkletter, Arthur Cooke	Summerside, P.E.I.
Loban, Louis	Winnipeg
Lockshin, Nathan	Winnipeg
Magid, Aaron	Winnipeg
Main, John	Deloraine
Marlatt, Helen Mary	Winnipeg
McDonald, John Alexander	Oak Lake
McEachern, Donald	Winnipeg
McGeachy, Barbara Adam	Winnipeg
McGill, David Earl	Holland
Mitchell, David Mike	Winnipeg
Mitchell, Hugh Addison	Lidstone
Morrison, Blair	Oakville
Morrison, George Edward	Winnipeg
Nelson, Bertha Eliza	Carberry
Oelkers, Henry	Winnipeg
Ostfeld, Jake Robert	Winnipeg
Patterson, Stanley	Myrtle
Pearlman, Louis	Winnipeg
Perrin, Maitland Boyd	Hartney
Peterson, Thomas Leslie	Framnes
Powlotsky, Claire Lois	Buchanan, Sask.
Privat, Benjamin Franklin	Killarney
Richardson, Roy Walter	Winnipeg
Roberts, Walter Charles	Winnipeg
Robinson, James	Saltcoats, Sask.
Robinson, William	Winnipeg
Rodgers, James Cecil	Elkhorn
Rodgers, Robert William Reginald	Elkhorn
Rumball, Albert St. Clair	Morden
Rzesnowski, Lorne William	Dauphin
Sawczak, Mary	Winnipeg
Scott, Donald Lawrence	Morden
Scurfield, Jack Melburn	Clearwater
Senensky, Morris	Winnipeg
Setka, William	Macoun, Sask.
Short, Maurice	Winnipeg
Stark, Sarah Ellen	Griswold
Stewart, Alick Kennedy	Winnipeg
Sugden, Charles Russell	Winnipeg
Swartzman, Edward	Winnipeg
Tibbitt, Berry Wayman	Rama, Sask.
Todd, John Bigelow	Winnipeg
Tolton, Morley Judson	Winnipeg
Underhill, Ambrose Stanley	Moline
Vye, James Preston	Weyburn, Sask.
Wark, Kathleen Jane	Minto
Willoughby, Gordon Leslie	Virden
Wiseman, Jeroch Louis	Winnipeg
Zaretsky, Ben	Winnipeg

Special Students in Matriculation for Medicine

Gordon, John King	Winnipeg
Longmore, Roderick Hector	Carman
Neville, John V.	Rivers

MEDICINE

First Year

Name	*Address*
Atkinson, Harry Sheridan	Deloraine
Alford, William H.	Oak Lake
Armstrong, Pearce C.	Winnipeg
Baker, William	St. Boniface
Basted, Meffie Robert	Pierson
Bellas, Norman Maurice	Saskatoon, Sask.
Bennett, Edward John	Winnipeg
Bernstein, Maurice H.	Winnipeg
Bethel, Lyman Redvers	Weyburn, Sask.
Black, William Arnott	Springfield
Bloomer, Joseph Arnold	Winnipeg
Book, Norman	Star City, Sask.
Borthwick, Kathleen	Morden
Bourgouin, John A.	Winnipeg
Childe, Arthur Edward	Deloraine
Christianson, Sigga	Wynyard, Sask.
Clark, John Wanstall	Baldur
Clark, Stephen J.	Winnipeg
Coodin, Paissie	Winnipeg
Corrigan, Cecil Edwin	Lampman, Sask.
Cohen, Highman	Winnipeg
Drach, Victor	Winnipeg
Duncan, Clifford Watson	Winnipeg
Erickson, Einar Hillman	Mary Hill
Ehmann, Peter Alex. James	Holdfast, Sask.
Evelyn, Wm. Frederick Dawson	Westbourne
Falconer, William Lynne	Winnipeg
Farrell, Conway Macalister Gray	Regina, Sask.
Finesilver, Herman S.	Winnipeg
Gagné, Walter J.	Fort Frances, Ont.
Gilhuly, Ian Keith	Winnipeg
Gillis, Ellen	Glenboro
Granovsky, Hiram J.	Winnipeg
Gunn, Wm. Robert Lynn	Winnipeg
Halinski, Frank	Sifton
Hall, Alcina E.	Brandon
Handcock, Sidney D.	Winnipeg
Handford, William Cuthbert	Bersay, Sask.
Hardy, Vivian Clarke	Winnipeg
Heirshberg, Pearl	Elmwood
Helgason, Frederick	Baldur
Hershfield, Louis	Winnipeg
Hjalmarson, Numi	Winnipegosis
Jackson, John Milne	Alexander
Jeffery, Robert U.	Winnipeg
Jenkins, Gertrude Verne	Winnipeg
Jickling, James Garner	Morden
Kennedy, Edward Roscoe	Glenbow
Kent, Herbert Knight	Winnipeg
Landry, Crawford	Mariapolis
Lang, Wilfred Ben	Oak Lake
Lansdown, Leslie Pittar	Winnipeg
Leckie, George Gibson	Foxwarren
Leveque, Leopold	Norwood
Lightburne, William Joseph	Arrowhead, B.C.

Name	*Address*
Loughlin, Louis J.	Winnipeg
Malcove, Lillian	Winnipeg
Markell, John Isadore	Winnipeg
Mason, Robert Henry	St. James
Matas, Matthew	Winnipeg
Moscovitch, Saul	Winnipeg
McBean, Myrtle Jean	Winnipeg
McDonald, Angus Smith	Winnipeg
McFetridge, Samuel Andrew	Reston
McFetridge, William John Moore	Edrans
McGauvran, Theodore Edgar	Lampman, Sask.
McIntyre, Campbell M.	Winnipeg
McIvor, Wilfred John	Winnipeg
McKenty, John	Winnipeg
McKenzie, Mary	Portage la Prairie
McLean, Herman Alexander	Killarney
McLennan, Roderick	Winnipeg
McLeod, James Lawrence	Estevan, Sask.
McPhail, Wilburn Darley	Winnipeg
McRae, Claude George Alexander	Winnipeg
Nicholas, Charles Earl	Winnipeg
Onhauser, C. Madge	Winnipeg
Peikoff, Samuel Solomon	Winnipeg
Penner, John Albert	Herbert, Sask.
Pototski, Michael	Sifton
Pototski, Peter	Sifton
Redlich, Frank A.	Winnipeg
Reid, Douglas Beaver	Winnipeg
Rosen, William	Winnipeg
Ross, Edward Lachlan	Morris
Saunders, Clifford Garner	Morden
Schulman, Louis	Winnipeg
Shaen, James	Winnipeg
Sherlock, George Herman	Winnipeg
Simpson, Glenn	Virden
Simpson, Charles Clifford	Crystal City
Skaletar, Anne M.	Winnipeg
Skaletar, Edward Albert	Winnipeg
Smale, Albert Rae	Brandon
Smith, Lawrence Arnaud Edmondston	Winnipeg
Spooner, C. Martin	Winnipeg
Stacey, Jack Wallace	Winnipeg
Stevens, Iva	Winnipeg
Stevens, Verna	Winnipeg
Walker, William Roy	Calgary, Alta.
Wallace, George Crosbie	Winnipeg
Watson, Robert George	Elkhorn
Wiebe, Cornelius W.	Winnipeg
Wright, David Alexander D.	Winnipeg
Yarmarko, Philip	Winnipeg
Zeavin, Samuel	Gilbert Plains

Second Year

Alleyn, Richard Edward	Morden
Anderson, Harry Martin	Winnipeg
Barclay, William Saunderson	North Vancouver, B.C.

Name	*Address*
Beaudoing, Leon	Notre Dame de Lourdes
Beckman, Isaac Harry	Winkler
Bickford, Fred Lennard	Benito
Black, Donald McIntosh	Winnipeg
Boyd, William John	Brookside, Sask.
Budd, Garnet John	Winnipeg
Bunge, Marie	Port Arthur, Texas
Burstein, Joseph	Winnipeg
Charusofsky, Alex	Winnipeg
Chataway, James Harold Herbert	Winnipeg
Churchill, Harold Shier	Brandon
Cleave, Russell Johnson	Winnipeg
Cohen, Reuben	Winnipeg
Cook, Alfred James	Winnipeg
Diamond, Abraham	Winnipeg
Diamond, Jack Charles	Winnipeg
Dodds, Geo. C.	Winnipeg
Dubnov, Isaac	Winnipeg
Dunne, Ronald James	Bay de Verde, Newfoundland
Fondaminsky, Israel	Winnipeg
Fox, Maurice	Winnipeg
Gerrie, Grace Mildred	Winnipeg
Gillies, McLeod	Baldur
Goorevitch, Charles Samuel	Winnipeg
Gordon, Charles A. R.	Winnipeg
Grant, John Gray	Brandon
Grieve, Harry Gordon	Winnipeg
Guttman, Alex	Winnipeg
Hall, Keith G.	Winnipeg
Halliday, David James	Gainsboro, Sask.
Hardy, Nigel A.	Winnipeg
Hollenberg, Abraham	Neudorf, Sask.
Hollenberg, Michael Samuel	Neudorf, Sask.
Isman, Garry B.	Regina, Sask.
Jauvoish, Simon	Winnipeg
Jonsson, Olafia Jonina	Gimli
Katz, Harry	Winnipeg
Knapp, Inda Stuart	Winnipeg
Leavitt, Arthur S.	Winnipeg
MacDougall, John Angus	Winnipeg
Malis, Solomon	Winnipeg
Mather, James Hartley	Asquith, Sask.
Meltzer, Sara	Winnipeg
Moyer, Ernest Leadley	Kantenville, Sask.
McCartney, Orvie Dynes	Winnipeg
McCullagh, Ernest Perry	Roland
McDiarmid, John Menzies	Winnipeg
McGuire, Frank Alexander	Winnipeg
McKeague, David Henderson	Winnipeg
McVicar, Charles Warwick	Regina, Sask.
Nichol, Alexander Franklin	Alexander
Onhauser, Joseph	Winnipeg
Pearl, Sarah A.	Winnipeg
Pickard, Henry Thomas	Winnipeg
Punak, Nicholas	Winnipeg

Name	*Address*
Ramsay, Frank Gladstone	Killarney
Rioch, Margaret George	Kenora, Ont.
Rose, Arthur Osborne	Winnipeg
Ross, Cecil Charles	Minnedosa
Shinbane, Hyman	Winnipeg
Siegelman, Benjamin Jack	Winnipeg
Somerville, Asbury	Winnipeg
Steele, John Taylor	Hamiota
Steiman, Iver Israel	Winnipeg
Steuart, Earle Way	Winnipeg
Stewart, Robert Fraser	Minnedosa
Story, John Boyd	Wawanesa
Thornton, Norman McLeod	Winnipeg
Thorlakson, Harold Frederick	Selkirk
Wackenroder, Henry F.	Winnipeg
Waldon, Harold V.	Killarney
Wherrett, George Jasper	Shoal Lake
Williamson, George Albert	Winnipeg
Wilson, Robert Benjamin Eustace	Woodstock, N.B.
Wright, Willard Arthur	Winnipeg

Third Year

Argue, Stanley E. Cooke	Winnipeg
Bond, Wallace	Frobisher, Sask.
Bridge, Reginald Clifford	Carman
Cameron, Marie Christina	Shoal Lake
Crane, George Leon	Weyburn, Sask.
Gardner, James Stanley	Norwood
Gibb, Douglas Forfar	Portage la Prairie
Gillies, McLeod	Baldur
Levick, Julius	Winnipeg
MacCharles, Clarence William	Winnipeg
MacLean, Donald John Gunn	Winnipeg
Magee, Henry Ross	Manitou
Popham, Harold E.	Winnipeg
Riddle, Leroy H.	Winnipeg
Ross, William Percival	Heward, Sask.
Rybak, Francis Adam	Winnipeg
Shubinsky, Abraham	Winnipeg
Story, Gladys Victoria	Wawanesa
Thompson, Edward Theodore	Winnipeg
VanVliet, William Birt	Winnipeg
Walkin, Frank	Winnipeg
Wright, Hiram	Cobden, Ont.
Zhivotovsky, Benjamin	Winnipeg

Fourth Year

Azoulay, Juda	Winnipeg
Bellas, Joseph	Saskatoon, Sask.
Benwell, Harry D.	Melville, Sask.
Carroll, Percival James	Carman
Carson, Julius Harry	Vancouver, B.C.
Chown, Bruce	Winnipeg
Davidson, George Alexander	Brandon
Dyma, Bronislaw	Winnipeg

Name	*Address*
Fieldman, Joseph David	Poland
Goodwin, Alexander McLean	Elkhorn
Graham, Gordon Douglas	Norwood
Hershfield, Harry	Winnipeg
Hogg, Arthur W.	Winnipeg
Isaacs, Hyman David	Winnipeg
Kinneard, George	Winnipeg
Maclean, Willard Gladstone	Winnipeg
MacRae, Donald Colin	Winnipeg
Musgrove, Wilfred Merle	Boissevain
Ryall, Edwin James	Carman
Seipp, Isadore	Winnipeg
Stewart, Roy John	Neepawa
Uhle, Otto Herman	Niverville
Vermaas, Angeline Isabelle P.	Winnipeg
Wilson, Ada Isabelle	Gladstone
Wood, William James	Winnipeg

Fifth Year

Abbott, Albert Clifford	Winnipeg
Austmann, Kristjan Jonsson	Winnipeg
Blakie, Neil Hector	Shoal Lake
Cunningham, Edison R.	Winnipeg
Dubnove, Aaron	Winnipeg
Finkelstein, Manly	Winnipeg
Fraser, Donald John	Winnipeg
Fraser, William Ross	Reston
Good, Hilton Samuel	Winnipeg
Goodwin, John Murray	Oak Lake
Green, Samuel S.	Winnipeg
Gryte, Lewis A.	Elm Creek
Hamilton, Thos. Wilfred	Crandall
Henry, John Milton	Edmonton, Alta.
Kitchen, Hubert Daniel	Souris
Lee, George Harold	Souris
Little, George Meldrum	Winnipeg
Magwood, William James	Killarney
McCrimmon, John Roderick	Carman
McFadyen, Oscar James	Parkbeg, Sask
McGuire, James Balfour	Winnipeg
McKenzie, William Gordon	Deloraine
Menzies, Alexander Morrison	Pender Island, B.C.
Meredith, Charles James	Glenboro
Mollard, William Melville	Balmoral
Morison, Harold	Winnipeg
Pincock, Thomas Alexander	Winnipeg
Rady, Max	Winnipeg
Sibbald, Malcolm L.	Winnipeg
Simpson, James Wendell	Winnipeg
Skaling, James Henry	Vancouver, B.C.
Smith, Harriet Isabel	Pilot Mound
Thompson, Steinn Olafur	Selkirk
Walsh, Frank Burton	Oxbow, Sask.
White, Ira Simmonds	Pilot Mound
Wilson, Margaret Jane	Edmonton, Alta.
Yuill, Victoria Irene	Winnipeg

Special Students in Medicine

Name	*Address*
Cuddy, Thos. Hughes	Winnipeg
Wintrobe, Maxwell Myer	Winnipeg

PHARMACY

First Year

Anderson, Matthew A.	Miami
Baldwin, Wm. B.	Rainy River, Ont.
Brown, Edward H.	Portage la Prairie
Cavaghan, Gibson	East Kildonan
Clark, Thomas H.	Winnipeg
Davis, Abraham	Winnipeg
Dewar, Garnet W.	Selkirk
Eck, Marion	Winnipeg
Goldstein, Abraham	Winnipeg
Goldstein, Caesar	Winnipeg
Graham, Stanley D.	The Pas
Hudson, Richard Paul	Katrine
Hunter, Walter	Neepawa
Lamb, Wilfred J.	Winnipeg
Lazeczko, Michael	Winnipeg
Marcovitch, Max	Winnipeg
Mitchell, George Albert	Norwood
Mitchell, Thomas Leslie	Norwood
Negrycz, Marie	Winnipeg
Ross, Daniel	Obron
Rowe, Stafford	Neepawa
Share, Myer	Winnipeg
Spence, Wilfred	Norwood
Simons, Richard P.	Winnipeg
Sodomsky, Samuel	Brandon
Stafford, Ashton C.	Winnipeg
Symchych, Alexander	Winnipeg
Wade, Earnest J.	Norwood
Walker, Clinton W.	Winnipeg
Watson, George B.	Carman

Second Year—Special Summer Course.

Adams, John William	Winnipeg
Bennett, Henry Jamieson	Winnipeg
Boardman, John Henry	Winnipeg
Burke, Ernest	Shoal Lake
Burkett, Arthur Earl	Gilbert Plains
Dack, Adolph	Morden
Evans, Edna E.	Killarney
Fenwick, Thomas	Winnipeg
Hitchinson, Chas. Bernard	Winnipeg
Jenkins, George Harold	Carman
Maguire, Robt. Willoughby	Winnipeg
McBurney, Chas. Jasper	Hartney
McDougall, Dougald	Winnipeg
Mitchell, Graham	Neepawa
Perrault, Clement J.	Winnipeg

Name	*Address*
Reid, Allan B.	Winnipeg
Russell, George Ernest	Winnipeg
Sanderson, Richard C.	Holland
Snell, Harold	Winnipeg
Whyte, George	Dauphin
Witherspoon, Alex. Chas.	Winnipeg

ARCHITECTURE

First Year

Barratt, Harry	Winnipeg
Morisset, Leo Philip	Winnipeg
Roberts, Geoffrey L.	St. James
Russell, Gordon Leslie	Winnipeg
Russell, John G.	Winnipeg
Wilson, David C.	Roland

Second Year

Chaffey, Elswood R. E.	Winnipeg

Fourth Year

Heatley, Harold M.	Winnipeg

ENGINEERING

First Year

Andrews, Russell H.	Winnipeg
Beatty, David E.	Winnipeg
Borgford, Helgi I. S.	Winnipeg
Brydon, Earle McKenzie	Carman
Burriss, Edward A.	Port Arthur, Ont.
Burrows, John A.	Winnipeg
Campbell, Alexander	Winnipeg
Cluff, Harold D.	Killarney
Code, Melville C.	Morris
Couch, Lawrence I.	Swan Lake
Cunningham, Ernest K.	Carman
Ellerby, Arthur E.	Winnipeg
Fowler, Alexander Murray	Baldur
Gordon, Charles W.	Winnipeg
Gould, Winston W.	Miami
Graham, James H.	Stony Mountain
Hardy, A. Elvin	Roland
Harrison, Ralph W.	Winnipeg
Hood, James W.	Sidney
Houston, Jack D.	Winnipeg
Ibbotson, Walter B.	Shoal Lake
Ireland, James D.	Winnipeg
Kapitan, Frank C.	Winnipeg
Kelleher, Earl	Winnipeg
Leppard, Wallace E.	Portage la Prairie
Long, George F.	Winnipeg

Name	*Address*
MacTaggart, Roderick G.	Winnipeg
Marion, Joseph A. P.	St. Boniface
Matthews, Wilbur W.	Winnipeg
Mauer, Rudolph W.	Winnipeg
Mawhinney, James G.	Oakville
McCullagh, Karl G.	Virden
McKellar, Malcolm	Winnipeg
Millidge, Lauder	Selkirk
O'Day, Martin	Winnipeg
Parke, Edmund J.	Winnipeg
Pasikov, William	Winnipeg
Porte, George A.	Niverville
Price, Edward D.	Winnipeg
Riddell, William F.	Winnipeg
Riddell, John Gerald	Coleman, Alta.
Ritz, Harry S.	Winnipeg
Ross, George H.	Minnedosa
Shipman, Charles B. P.	Winnipeg
Sigurjonsson, Jon	Winnipeg
Sinclair, Archie	Winnipeg
Smith, William B.	Winnipeg
Staples, Evans	Winnipeg
Suffka, John L.	Winnipeg
Sutherland, Alexander H.	Creelman, Sask.
Valde, Benjamin Edwin	Winnipeg
Warkentin, C. P.	Winkler
Williams, Edward Arnold	Gladstone
Wilton, Roy W.	Winnipeg
Winram, William H.	Killarney
Young, Hugh A.	Winnipeg

Second Year

Abraham, Yehuda	Winnipeg
Battershill, Charles A.	East Kildonan
Cheshire, William V.	Winnipeg
Creighton, James M.	Winnipeg
Devine, John H.	Winnipeg
Eyford, Cornell T.	Winnipeg
Finch, Gordon	Winnipeg
Fulton, Edward A.	Winnipeg
Gilbert, Gordon M.	Winnipeg
Halland, Henrick N.	Starbuck
Henry, John Robertson	Winnipeg
Jackson, Alexander B.	Minnedosa
Lechtzier, Saul	Winnipeg
LeNeveu, Arthur	Winnipeg
Mackay, James E.	Russell
Mitchell, James Ian	Selkirk
Muller, Gustave C.	St. Boniface
Muller, Louis Francis	St. Boniface
O'Day, John Edward	Winnipeg
O'Neill, Ewart P.	Winnipeg
Robson, William G.	Winnipeg
Sinaisky, Aaron	Winnipeg
Steenberg, Neil J. F.	Winnipeg

Name	*Address*
Tempest, William F. H.	Winnipeg
Trueman, James C.	Winnipeg
Trueman, Mark C.	Winnipeg
Wallace, Joseph W.	Winnipeg
Watson, Stewart C.	Winnipeg
Woods, Walter H.	Winnipeg
Worthington, Roy E.	Winnipeg
Young, Minto D.	Winnipeg

Third Year—Civil Engineering

Buckingham, Clifford C.	Winnipeg
Doidge, Henry George	Winnipeg
Hehn, John A.	Winnipeg
Pybus, Ralph C.	Winnipeg
Rigby, William R.	Winnipeg
Sinclair, George E. B.	Winnipeg

Third Year—Electrical Engineering

Armstrong, Harold M.	Winnipeg
Bider, Bernard	Winnipeg
Brimer, Lawrence Frederick	Winnipeg
Bronstein, Samuel	Winnipeg
Fraser, William S.	Winnipeg
Howard, James P.	Winnipeg
McCauig, Donald A.	Minto
Walden, John G. L.	Bagot

Fourth Year—Civil Engineering

Abel, John S.	Vancouver, B.C.
Boyd, Thomas H.	Winnipeg
Cassin, Charles M.	Kaleida
Dingle, James C.	Winnipeg
Evans, Victor H.	Winnipeg
Fleming, John M.	Winnipeg
Johnson, Emil E.	East Kildonan
Whitehill, Peter	Winnipeg

Fourth Year—Electrical Engineering

Bregman, Max	Winnipeg
Dick, Victor W.	Winnipeg
Frith, Lawrence E. C.	Winnipeg
Kelsey, Ernest S.	Norwood
Litin, Leon	Winnipeg
Lovell, William Edward	Winnipeg
Quealy, Oscar H.	Winnipeg
Williams, Arthur S.	Winnipeg

Special Students in Engineering

Hirota, Seimei	Winnipeg

AGRICULTURE

Third Year

Name	*Address*
Asemissen, Max	Woodlands
Blanchard, J. F.	Manitou
Broadfoot, R.	Winnipeg
Clark, R.	Stonewall
Davies, W. D.	Fortier
de Yong, John	East Kildonan
Harvey, J. M.	Durban
Johnson, George	Brandon
Kemp, Harold	Durban
Kerr, Wilfred	Belmont
Park, J. E.	Fleming
Pidruchney, W. N.	Ethelbert
Radcliffe, J. H.	Bagal
Rae, Wilfred J.	Roblin
Rigby, E. J.	Headingly
Sallans, W. G.	McConnell
Swanston, J. T.	Sperling
Thexton, R. H.	Selkirk

Fourth Year

Barimboum, M.	Winnipeg
Clarke, Dorothy	Norwood
Crawford, John E.	Pipestone
Dixon, E. A.	Lavinia
Dempsey, C. T.	Winnipeg
Grant, H. C.	Winnipeg
Hall, R.	Elm Creek
Hancock, Leslie	Govan
Hinchcliff, H.	Souris
Purchase, A. R.	Winnipeg
Renton, W. B.	Deloraine
Thompson, Jos.	Stainsleigh
Townsend, Ted	Clandeboye
Walker, Harold	Virden
Watkins, Geo. O.	Holland
Will, W. G.	Craik
Young, Nelson	Cypress River

Fifth Year

Carlson, J. A.	Roblin
Chapman, C. S.	Winnipeg
Coltart, T. H.	Winnipeg
Goorevitch, Julius	Camper
Graham, John D.	Roland
Hopper, Roy	Winnipeg
Hopkins, J. J.	Beresford
Laughland, Frank	Hartney
McPhail, Hugh	Winnipeg
Mutchmore, S.	Winnipeg
Norquay, John	Pigeon Bluff
Parker, W. J.	Sanford
Prodan, C.	Sifton
Sallans, B. J.	Brandon
Trembath, James	Cartwright

HOME ECONOMICS

Third Year

Name	*Address*
Brown, Ella	Sperling
Elliott, Florence	Victoria, B.C.
Jenkins, Erma	Union Point
King, Helen	Juniata
Langdon, Marian	Embro
Lee, Meta P.	Harrowby
McKinnell, Catherine	Teulon
Moorhead, Ruth	Milestone
Munshaw, Agnes	Hamiota
Robertson, F.	Cartwright
Robson, Annie	Deleau
Rogers, Bert	Carberry
Stevens, Alice	Westbank

Fourth Year

Archibald, Lillian	Lacombe
Benson, Nora	Neepawa
Edse, Lena	Morris
McDonald, Gladys	Virden
McQueen, Jessie	Fleming
Sirett, Winnifred	Neepawa
Stewart, Ella	Birtle
Van der Merwe, I. M.	

Fifth Year

Hallwright, Gladys	Victoria, B.C.
Lyon, Margaret	Winnipeg
Reid, Margaret	Winnipeg
Shafer, Alberta	Winnipeg
Sissons, Verna V. V.	Winnipeg
Sproule, Laurie	Winnipeg
St. Ruth, D. M.	Winnipeg
Thordarson, Thorey	Winnipeg

EVENING BUSINESS COURSES

Business English

Aseltine, Kenneth C.	Winnipeg
Albright, Howard H.	Winnipeg
Alton, Reginald A. T.	Winnipeg
Bell, Elva	Winnipeg
Bragg, Alfred	East Kildonan
Breakwell, Frank Edward Thomas	Winnipeg
Briegel, Francis James	Winnipeg
Clark, Arnot M.	Winnipeg
Codere, Philip A.	Winnipeg
Cooke, Arthur William	East Kildonan
Davidson, Edward Henry	Winnipeg
Davis, Henry Noel Cochrane	Winnipeg
Dunnington, James Thos. Wm.	Winnipeg
Fennell, Ernest Lawrence	Winnipeg

Name	*Address*
Folliott, Brian Harry	Winnipeg
Guy, Marjorie Francess	Winnipeg
Johnston, Christopher D. T.	Winnipeg
Jones, Llewellyn Arthur	Winnipeg
Kilborn, Clarence M.	Winnipeg
Krawczyk, Jennie	Winnipeg
Langlois, Reginald H. L.	Winnipeg
Langley, Alice Maud	Winnipeg
McDonald, John Arthur	Winnipeg
McLean, Marshall Spurgeon	Winnipeg
McQuaker, J. A.	Winnipeg
Moore, Hubert Harcourt	Winnipeg
Nash, Mabel	Winnipeg
Ogilvie, John	Winnipeg
Parent, Henry J.	Winnipeg
Paterson, Gordon	Winnipeg
Portigal, Samuel A.	Winnipeg
Prescott, Marion Helen	Winnipeg
Rigg, Wilfred C.	Winnipeg
Rose, Hamilton	Winnipeg
Rosen, John A. G.	Winnipeg
Rouse, Florence	Winnipeg
Ruddell, Stuart George	Winnipeg
Showler, Arnold	Winnipeg
Singleton, William John	Winnipeg
Stewart, Charles C.	Winnipeg
Stewart, John	Winnipeg
Tease, Francis Gregg	Winnipeg
Tremayne, Marguerite Gladys	Winnipeg
Wallace, Mary G.	Winnipeg
White, John Herbert	Winnipeg
Welch, Mrs. Anna S.	Winnipeg
Weldon, Joseph Anthony	Winnipeg
Whillans, Mary	Winnipeg
Wilson, James	Winnipeg

Commercial Arithmetic

Aseltine, Kenneth C.	Winnipeg
Alton, Reginald A. T.	Winnipeg
Bell, Elva	Winnipeg
Breakwell, Frank E. T.	Winnipeg
Clark, Arnot M.	Winnipeg
Davidson, Edward Henry	Winnipeg
Fennell, Ernest L.	Winnipeg
Folliott, Brian Harry	Winnipeg
Grundy, John	Winnipeg
Gull, Marjorie F.	Winnipeg
Home, Bruce	Winnipeg
Johnston, Christopher D. T.	Winnipeg
Jones, Llewellyn A.	Winnipeg
Kilborn, Clarence M.	Winnipeg
Langlois, Reginald H.	Winnipeg
Matthews, Harold W.	Winnipeg
McDonald, John A.	Winnipeg
McLean, Marshall S.	Winnipeg

Name	*Address*
McMinn, John R.	Winnipeg
Moore, Hubert H.	Winnipeg
Ogilivie, John	Winnipeg
Parent, Henry J.	Winnipeg
Patterson, Gordon	Winnipeg
Ruddell, Stuart George	Winnipeg
Stewart, John	Winnipeg
Tease, Francis G.	Winnipeg
Troup, John George	Winnipeg
Weldon, Joseph Anthony	Winnipeg
Wilson, James	Winnipeg

Commercial Law I

Aseltine, Kenneth C.	Winnipeg
Alton, Reginald A. T.	Winnipeg
Bate, Hugh C.	Winnipeg
Barbour, James H.	Winnipeg
Bartholomew, Gilbert	Norwood
Beattie, Walter	Winnipeg
Bragg, Alfred	East Kildonan
Clark, Arnott N.	Winnipeg
Cotter, Chas. H.	St. James
Davidson, Ed. Henry	Winnipeg
Elson, Edgar W.	Winnipeg
Fairchild, Wilfred A.	Winnipeg
Folliott, Brian H.	Winnipeg
Gladstone, Chas. V.	Winnipeg
Goldstein, Isaac	Winnipeg
Grundy, John	Winnipeg
Hague, Francis C.	Winnipeg
Hare, David S.	Winnipeg
Hemmeon, Arthur J.	Winnipeg
Laing, Cecil H. H.	Winnipeg
Langlois, Reginald H. L.	Winnipeg
Liston, Robt. H.	Winnipeg
Matthews, Harold W.	Winnipeg
McBride, Geo. M.	Winnipeg
McCullagh, Eric M.	Winnipeg
McDonald, John A.	Winnipeg
McLean, Marshall S.	Winnipeg
McMinn, John R.	Winnipeg
McNichol, Lawrence B.	Winnipeg
Middleton, Herbert B.	Winnipeg
Moir, Wm.	Winnipeg
Moore, Hubert H.	Winnipeg
Parent, Henry J.	Winnipeg
Paterson, Gordon	Winnipeg
Rigg, Wilfred C.	Winnipeg
Rosen, Michael	Winnipeg
Rosenburg, Louis	Winnipeg
Ruddell, Stuart G.	Winnipeg
Scherrer, Ernest	Winnipeg
Sparrow, Wm. S.	Winnipeg
Stewart, John	Winnipeg
Stuart, Wm. R.	Winnipeg

Name	*Address*
Tapper, Lawrence E.	Winnipeg
Taylor, Cecil O.	Winnipeg
Taylor, Norman C.	Winnipeg
Tease, Francis G.	Winnipeg
Thomas, Daniel A.	Winnipeg
Troop, John Geo.	Winnipeg
Weldon, Joseph A.	Winnipeg

Commercial Law II

Armstrong, David	Winnipeg
Briegel, Francis James	Winnipeg
Craig, Arthur	West Kildonan
Johnson, Frederick	Winnipeg
Macdonald, Hamish Ross	Winnipeg
Maclean, G. A.	Winnipeg
Mann, Daniel	Winnipeg
McDonald, W. W.	Winnipeg
Middleton, Ernest William	Winnipeg
Miller, P. C.	Winnipeg
Pawlett, Duncan H.	Winnipeg
Riley, Clarence V. F.	Winnipeg
Sims, Philip	Winnipeg

Auditing I

Alton, Reginald A. T.	Winnipeg
Bartholomew, Gilbert	Norwood
Clark, Arnott N.	Winnipeg
Cooksey, D.	Winnipeg
Davidson, Ed. Henry	Winnipeg
Fairchild, Wilfred A.	Winnipeg
Folliott, Brian H.	Winnipeg
Gladstone, Chas. V.	Winnipeg
Goldstein, Isaac	Winnipeg
Grant, Wm. Mingaye	Winnipeg
Grundy, John	Winnipeg
Kinniburgh, W. A.	Winnipeg
Langlois, Reginald H. L.	Winnipeg
Lewis, H.	Winnipeg
Mackay, Thos. Fleming	Winnipeg
McCullagh, Eric M.	Winnipeg
McDonald, John A.	Winnipeg
McLean, Marshall S.	Winnipeg
McMinn, John R.	Winnipeg
McIntosh, W.	Winnipeg
Munro, G. F.	Winnipeg
Parent, Henry J.	Winnipeg
Paterson, Gordon	Winnipeg
Robson, Leslie Rede	Winnipeg
Ruddell, Stuart G.	Winnipeg
Saul, T. E.	Winnipeg
Stewart, John	Winnipeg
Taylor, Cecil O.	Winnipeg
Tibbs, F.	Winnipeg
Weldon, Joseph A.	Winnipeg

Auditing II

Name	*Address*
Armstrong, David	Winnipeg
Craig, Arthur	Winnipeg
Driscoll, George Edward	Winnipeg
Hare, George Beresford	Winnipeg
Johnson, Frederick	Winnipeg
Macdonald, Hamish Ross	Winnipeg
Maclean, G. A.	Winnipeg
Mann, Daniel	Winnipeg
McCartney, C. E.	Winnipeg
McDonald, W. W.	Winnipeg
Sims, Philip	Winnipeg

Accounting I

Aseltine, Kenneth C.	Winnipeg
Aitken, Geo. H.	East Kildonan
Aitken, James H.	East Kildonan
Armstrong, David	Winnipeg
Beatty, Walter	Winnipeg
Blades, Jos. W.	Winnipeg
Bragg, Alfred	East Kildonan
Budd, Arnold	Winnipeg
Brownell, Lawrence Edward	Winnipeg
Cassidy, Morris	Winnipeg
Caswell, Gabriel J.	Winnipeg
Clark, Arnold N.	Winnipeg
Collins, Leonard Lawrence	Winnipeg
Cook, Wm.	Winnipeg
Dolger, Joseph	Winnipeg
Douglas, John A.	Winnipeg
Drysdale, Wm.	Winnipeg
Elson, Edgar W.	Winnipeg
Essery, Wm. H.	Sturgeon Creek
Fairbairn, Geo. P.	Winnipeg
Fairchild, Wm. A.	Winnipeg
Fennell, Ernest L.	Winnipeg
Gate, Chas. F.	Winnipeg
Gillespie, Alf. J.	Elmwood
Gillespie, John Wm.	Winnipeg
Gladstone, Chas. V.	Winnipeg
Graham, James M.	Winnipeg
Grant, Wm. M.	Winnipeg
Guy, Marjorie Francess	Winnipeg
Hague, Francis C.	Winnipeg
Hare, David S.	Winnipeg
Halliday, Cyril Charles	Winnipeg
Hemmeon, Arthur J.	Winnipeg
Harris, Sydney T. J.	Winnipeg
Harris, Thomas A.	Winnipeg
Home, Bruce	Winnipeg
Hornby, Albert B.	Winnipeg
Howlett, Benj. J.	Winnipeg
Howie, Thomas	Winnipeg
Hughes, Albert E. H.	Winnipeg
Jacobs, Robt. L.	Winnipeg
Jones, Llewellyn Arthur	Winnipeg

Name	*Address*
Kilbourne, Clarence N.	Winnipeg
Kitchen, John	Winnipeg
Lambert, Robert S.	Winnipeg
Little, Henry O.	Winnipeg
Litwack, Joseph	Winnipeg
Logan, Augusta A. R.	Winnipeg
MacKay, Thomas F.	Winnipeg
McBride, Geo. N.	Winnipeg
McCallum, Alex. M.	Norwood
McConnell, John M.	Winnipeg
McDonald, John	East Kildonan
McDonald, John A.	Winnipeg
McDonald, Thomas	East Kildonan
McGregor, Dan. R.	Winnipeg
McLean, Marshall S.	Winnipeg
McMinn, John R.	Winnipeg
McWee, Jas. L.	Winnipeg
Messner, Anthony J.	Winnipeg
Midwinter, Chas. A.	Winnipeg
Mills, Geo.	Winnipeg
Moore, Hubert H.	Winnipeg
Parent, Henry J.	Winnipeg
Paterson, Gordon	Winnipeg
Rosen, Michael	Winnipeg
Ruddell, Stuart G.	Winnipeg
Scott, Arthur C.	Winnipeg
Shattuck, Paul R.	Winnipeg
Sherwood, Walter D.	Winnipeg
Smith, Ronald	Winnipeg
Stuart, Wm. R.	Winnipeg
Sypher, Jas. R.	Winnipeg
Taylor, Cecil Owen	Winnipeg
Taylor, Norman C.	Winnipeg
Thomas, Daniel A.	Winnipeg
Treble, Wm. W.	Winnipeg
Tease, Francis G.	Winnipeg
Welsford, Gerald C.	Winnipeg
Warde, Leo	Winnipeg
Wylie, James	St. James

Accounting II

Alton, Reginald Alton Tijou	Montreal
Bartholomew, Gilbert	Norwood
Davidson, Edward Henry	Winnipeg
Ganby, Frederick Robert	Winnipeg
Gould, William Allan	Norwood
Howlett, Gershon D.	Winnipeg
Kinniburgh, William Anderson	Winnipeg
Matthews, Harold Whitehouse	Winnipeg
McNichol, Lawrence B.	Winnipeg
Singleton, William John	Winnipeg
Tapper, Lawrence Edward	Winnipeg
Taylor, James Wilson	St. Vital
Tibbs, F.	Winnipeg
Troup, John George	Winnipeg
Weldon, Joseph Anthony	Winnipeg

Accounting III

Name	*Address*
Armstrong, David	Winnipeg
Craig, Arthur	West Kildonan
Driscoll, George Edward	Winnipeg
Dunbar, James E.	Winnipeg
Hare, George Beresford	Winnipeg
Johnson, Frederick	Winnipeg
Macdonald, Hamish Ross	Winnipeg
Mann, Daniel	Winnipeg
McCartney, C. E.	Winnipeg
Maclean, G. A.	Winnipeg
McDonald, W. W.	Winnipeg
Patrick, Wm. Mitchell Pringle	Winnipeg
Sims, Philip	Winnipeg

SUMMARY

Arts—

First Year	257	
Second Year	159	
Third Year	82	
Fourth Year	76	
Special Students	44	
	—	618

Special Course for Teachers

Second year		37

Master of Arts		26

Senior Matriculation—

Engineering	75	
Medicine	88	
Special Students	2	
	—	165

Science—

First Year	16	
Second Year	15	
Third Year	11	
Fourth Year	8	
Special Students	4	
	—	54

Medicine—

First Year	102	
Second Year	76	
Third Year	22	
Fourth Year	26	
Fifth Year	37	
Special Students	2	
	—	265

Pharmacy—

First Year	30	
Second Year—(Special Summer course)	21	
	—	51

Engineering—

First Year	52	
Second Year	31	
Third Year Civil	6	
Third Year Electrical	8	
Fourth Year Civil	8	
Fourth Year Electrical	8	
Special Students	2	
	—	115

Architecture		8

Law—

First Year	46	
Second Year	33	
Third Year	28	
	—	107

Agriculture—

Third Year	25	
Fourth Year	17	
Fifth Year	15	
	—	57

Home Economics—

Third Year	13	
Fourth Year	8	
Fifth Year	8	
	—	29

Returned Soldiers' Courses		32

Extension Courses—

Evening Business Courses	163	
Short Course in Business	66	
Social Welfare Work	60	
Industrial Economics	20	
Mining	40	
History of Art	175	
Rural Economics	73	
	—	597
		2161